



Blast 2 Sequences results

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Structure

BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.17 [Aug-26-2007]

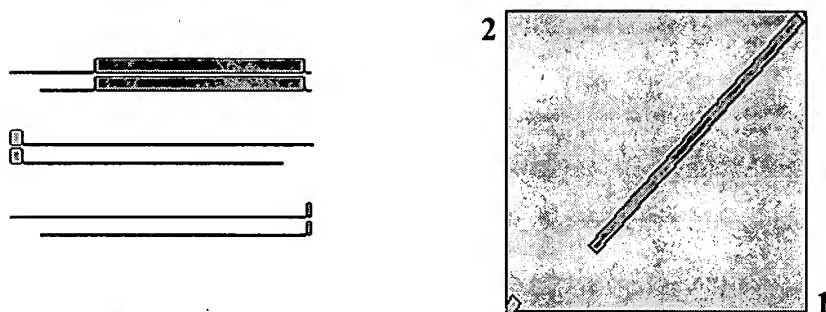
Match: Mismatch: gap open: gap extension:
 x_dropoff: expect: wordsize: Filter ☒ View option
 Masking character option Masking color option
☒ Show CDS translation

Sequence 1: [gi|5420376|Hepatitis C virus type 1b complete genome, isolate Con1](#)

Length = 9604 (1 .. 9605)

Sequence 2: [gi|5441831|Hepatitis C virus replicon I377/NS2-3'UTR](#)

Length = 8636 (1 .. 8637)



NOTE: Bitscore and expect value are calculated based on the size of the nr database.

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence.



Score = 1.261e+04 bits (6560), Expect = 0.0
 Identities = 6646/6646 (100%), Gaps = 0/6646 (0%)
 Strand=Plus/Plus

CDS:polyprotein [Hep	809	A M D R E M A A S C G G A V F V G L I
Query	2767	CCATGGACCGGGAGATGGCAGCATCGTGCGGAGGCGCGGTTTTCGTAGGTCTGATA
Sbjct	1799	CCATGGACCGGGAGATGGCAGCATCGTGCGGAGGCGCGGTTTTCGTAGGTCTGATA
CDS:non-structural p	1	M D R E M A A S C G G A V F V G L I
CDS:polyprotein [Hep	829	L T L S P H Y K L F L A R L I W W L Q
Query	2827	TGACCTTGTCACCGCACTATAAGCTGTTTCCTCGCTAGGCTCATATGGTGGTTACAA
Sbjct	1859	TGACCTTGTCACCGCACTATAAGCTGTTTCCTCGCTAGGCTCATATGGTGGTTACAA

CDS:non-structural p	20	L T L S P H Y K L F L A R L I W W L Q
CDS:polyprotein [Hep	849	F I T R A E A H L Q V W I P P L N V R
Query	2887	TTATCACCAGGGCCGAGGCACACTTGCAAGTGTGGATCCCCCCCCTCAACGTTTCGG
Sbjct	1919	TTATCACCAGGGCCGAGGCACACTTGCAAGTGTGGATCCCCCCCCTCAACGTTTCGG
CDS:non-structural p	40	F I T R A E A H L Q V W I P P L N V R
CDS:polyprotein [Hep	869	G R D A V I L L T C A I H P E L I F T
Query	2947	GCCGCGATGCCGTATCCTCCTCACGTGCGCGATCCACCCAGAGCTAATCTTTACC
Sbjct	1979	GCCGCGATGCCGTATCCTCCTCACGTGCGCGATCCACCCAGAGCTAATCTTTACC
CDS:non-structural p	60	G R D A V I L L T C A I H P E L I F T
CDS:polyprotein [Hep	889	T K I L L A I L G P L M V L Q A G I T
Query	3007	CCAAAATCTTGCTCGCCATACTCGGTCCACTCATGGTGTCCAGGCTGGTATAACC
Sbjct	2039	CCAAAATCTTGCTCGCCATACTCGGTCCACTCATGGTGTCCAGGCTGGTATAACC
CDS:non-structural p	80	T K I L L A I L G P L M V L Q A G I T
CDS:polyprotein [Hep	909	V P Y F V R A H G L I R A C M L V R K
Query	3067	TGCCGTACTTCGTGCGCGCACACGGGCTCATTCGTGCATGCATGCTGGTGCGAAG
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CDS:non-structural p	100	V P Y F V R A H G L I R A C M L V R K
CDS:polyprotein [Hep	929	A G G H Y V Q M A L M K L A A L T G T
Query	3127	CTGGGGGTCAATTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAGGTACG
Sbjct	2159	CTGGGGGTCAATTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAGGTACG
CDS:non-structural p	120	A G G H Y V Q M A L M K L A A L T G T
CDS:polyprotein [Hep	949	V Y D H L T P L R D W A H A G L R D L
Query	3187	TTTATGACCATCTCACCCCACTGCGGGACTGGGCCCACGCGGGCCTACGAGACCTT
Sbjct	2219	TTTATGACCATCTCACCCCACTGCGGGACTGGGCCCACGCGGGCCTACGAGACCTT
CDS:non-structural p	140	V Y D H L T P L R D W A H A G L R D L
CDS:polyprotein [Hep	969	V A V E P V V F S D M E T K V I T W G
Query	3247	TGGCAGTTGAGCCCGTCGTCTTCTCTGATATGGAGACCAAGGTTATCACCTGGGGG
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CDS:non-structural p	160	V A V E P V V F S D M E T K V I T W G
CDS:polyprotein [Hep	989	D T A A C G D I I L G L P V S A R R G
Query	3307	ACACCGCGCGTGTGGGGACATCATCTTGGGCCTGCCCGTCTCCGCCCCGAGGGGG
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CDS:non-structural p	180	D T A A C G D I I L G L P V S A R R G
CDS:polyprotein [Hep	1009	E I H L G P A D S L E G Q G W R L L A
Query	3367	AGATACATCTGGGACCGGCAGACAGCCTTGAAGGGCAGGGGTGGCGACTCCTCGCG
Sbjct	2399	AGATACATCTGGGACCGGCAGACAGCCTTGAAGGGCAGGGGTGGCGACTCCTCGCG
CDS:non-structural p	200	E I H L G P A D S L E G Q G W R L L A
CDS:polyprotein [Hep	1029	I T A Y S Q Q T R G L L G C I I T S L
Query	3427	TTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCACTAGCCTC
Sbjct	2459	TTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCACTAGCCTC

CDS:non-structural p	220	I T A Y S Q Q T R G L L G C I I T S L
CDS:polyprotein [Hep	1049	G R D R N Q V E G E V Q V V S T A T Q
Query	3487	GCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGCAACACAA
Sbjct	2519	GCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGCAACACAA
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CDS:polyprotein [Hep	1069	F L A T C V N G V C W T V Y H G A G S
Query	3547	TCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGCCGGCTCA
Sbjct	2579	TCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGCCGGCTCA
CDS:non-structural p	260	F L A T C V N G V C W T V Y H G A G S
CDS:polyprotein [Hep	1089	T L A G P K G P I T Q M Y T N V D Q D
Query	3607	CCCTTGCCGGGCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGACCAGGAC
Sbjct	2639	CCCTTGCCGGGCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGACCAGGAC
CDS:non-structural p	280	T L A G P K G P I T Q M Y T N V D Q D
CDS:polyprotein [Hep	1109	V G W Q A P P G A R S L T P C T C G S
Query	3667	TCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTGCGGCAGC
Sbjct	2699	TCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTGCGGCAGC
CDS:non-structural p	300	V G W Q A P P G A R S L T P C T C G S
CDS:polyprotein [Hep	1129	D L Y L V T R H A D V I P V R R R G D
Query	3727	ACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCGGGGCGAC
Sbjct	2759	ACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCGGGGCGAC
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CDS:polyprotein [Hep	1149	R G S L L S P R P V S Y L K G S S G G
Query	3787	GGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCGGGCGGT
Sbjct	2819	GGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCGGGCGGT
CDS:non-structural p	340	R G S L L S P R P V S Y L K G S S G G
CDS:polyprotein [Hep	1169	L L C P S G H A V G I F R A A V C T R
Query	3847	TGCTCTGCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTGCACCCGA
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Query	3907	TTGCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTATGCGGTCC
Sbjct	2939	TTGCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTATGCGGTCC
CDS:non-structural p	380	V A K A V D F V P V E S M E T T M R S
CDS:polyprotein [Hep	1209	V F T D N S S P P A V P Q T F Q V A H
Query	3967	TCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGTGGCCCAT
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CDS:polyprotein [Hep	1229	H A P T G S G K S T K V P A A Y A A Q
Query	4027	ACGCCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGCAGCCCAA
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Sbjct 3119 ATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGGGGCGTAT
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CDS:non-structural p 540 A T P P G S V T V P H P N I E E V A L
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Sbjct 3719 ACTCAGTGATCGACTGCAATACATGTGTACCCAGACAGTCGACTTCAGCCTGGAC
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Query 4747 CCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTCGCAGCGG
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Sbjct 3959 AGCTCAGCCCCGCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACACACCAGGG
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Query 4987 CCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCTCACCCAC
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CDS:non-structural p 760 D A H F L S Q T K Q A G D N F P Y L V
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CDS:non-structural p	820	G A V Q N E V T T T H P I T K Y I M A
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Sbjct	4319	TGTCGGCTGACCTGGAGGTCGTCACGAGCACCTGGGTGCTGGTAGGCGGAGTCCTA
CDS:non-structural p	840	M S A D L E V V T S T W V L V G G V L
CDS:polyprotein [Hep	1669	A L A A Y C L T T G S V V I V G R I I
Query	5347	CTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAGGATCATC
Sbjct	4379	CTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAGGATCATC
CDS:non-structural p	860	A L A A Y C L T T G S V V I V G R I I
CDS:polyprotein [Hep	1689	S G K P A I I P D R E V L Y R E F D E
Query	5407	CCGGAAGCCGCCCATCATTCCCACAGGGAAGTCCTTTACCGGGAGTTCGATGAG
Sbjct	4439	CCGGAAGCCGCCCATCATTCCCACAGGGAAGTCCTTTACCGGGAGTTCGATGAG
CDS:non-structural p	880	S G K P A I I P D R E V L Y R E F D E
CDS:polyprotein [Hep	1709	E E C A S H L P Y I E Q G M Q L A E Q
Query	5467	AAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGCCGAACAA
Sbjct	4499	AAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGCCGAACAA
CDS:non-structural p	900	E E C A S H L P Y I E Q G M Q L A E Q
CDS:polyprotein [Hep	1729	K Q K A I G L L Q T A T K Q A E A A A
Query	5527	AACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGCTGCTGCT
Sbjct	4559	AACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGCTGCTGCT
CDS:non-structural p	920	K Q K A I G L L Q T A T K Q A E A A A
CDS:polyprotein [Hep	1749	V V E S K W R T L E A F W A K H M W N
Query	5587	TGGTGGAAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATATGTGGAAT
Sbjct	4619	TGGTGGAAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATATGTGGAAT
CDS:non-structural p	940	V V E S K W R T L E A F W A K H M W N
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Query	5647	TCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCCCGCGATA
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CDS:non-structural p	960	I S G I Q Y L A G L S T L P G N P A I
CDS:polyprotein [Hep	1789	S L M A F T A S I T S P L T T Q H T L
Query	5707	CACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACATACCCCTC
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CDS:polyprotein [Hep	1809	F N I L G G W V A A Q L A P P S A A S
Query	5767	TTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCAGCGCTGCTTCT
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CDS:non-structural p	1000	F N I L G G W V A A Q L A P P S A A S
CDS:polyprotein [Hep	1829	F V G A G I A G A A V G S I G L G K V
Query	5827	TCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGGGAAGGTG
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CDS:non-structural p	1020	F V G A G I A G A A V G S I G L G K V
CDS:polyprotein [Hep	1849	V D I L A G Y G A G V A G A L V A F K
Query	5887	TGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGCCTTTAAG
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CDS:non-structural p	1040	V D I L A G Y G A G V A G A L V A F K
CDS:polyprotein [Hep	1869	M S G E M P S T E D L V N L L P A I L
Query	5947	TGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCCCTGCTATCCTC
Sbjct	4979	TGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCCCTGCTATCCTC
CDS:non-structural p	1060	M S G E M P S T E D L V N L L P A I L
CDS:polyprotein [Hep	1889	P G A L V V G V V C A A I L R R H V G
Query	6007	CTGGCGCCCTAGTCGTCGGGGTCGTGTGCGCAGCGATACTGCGTCGGCACGTGGGC
Sbjct	5039	CTGGCGCCCTAGTCGTCGGGGTCGTGTGCGCAGCGATACTGCGTCGGCACGTGGGC
CDS:non-structural p	1080	P G A L V V G V V C A A I L R R H V G
CDS:polyprotein [Hep	1909	G E G A V Q W M N R L I A F A S R G N
Query	6067	GGGAGGGGGCTGTGCACTGGATGAACCGGCTGATAGCGTTTCGCTTCGCGGGGTAAC
Sbjct	5099	GGGAGGGGGCTGTGCACTGGATGAACCGGCTGATAGCGTTTCGCTTCGCGGGGTAAC
CDS:non-structural p	1100	G E G A V Q W M N R L I A F A S R G N
CDS:polyprotein [Hep	1929	V S P T H Y V P E S D A A A R V T Q I
Query	6127	TCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCACTCAGATC
Sbjct	5159	TCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCACTCAGATC
CDS:non-structural p	1120	V S P T H Y V P E S D A A A R V T Q I
CDS:polyprotein [Hep	1949	S S L T I T Q L L K R L H Q W I N E D
Query	6187	CTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAGTGGATCAACGAGGAC
Sbjct	5219	CTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAGTGGATCAACGAGGAC
CDS:non-structural p	1140	S S L T I T Q L L K R L H Q W I N E D
CDS:polyprotein [Hep	1969	S T P C S G S W L R D V W D W I C T V
Query	6247	CCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATGCACGGTG
Sbjct	5279	CCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATGCACGGTG
CDS:non-structural p	1160	S T P C S G S W L R D V W D W I C T V
CDS:polyprotein [Hep	1989	T D F K T W L Q S K L L P R L P G V P
Query	6307	CTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGGAGTCCCC
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CDS:non-structural p	1180	T D F K T W L Q S K L L P R L P G V P
CDS:polyprotein [Hep	2009	F S C Q R G Y K G V W R G D G I M Q T
Query	6367	TCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCATGCAAACC
Sbjct	5399	TCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCATGCAAACC
CDS:non-structural p	1200	F S C Q R G Y K G V W R G D G I M Q T
CDS:polyprotein [Hep	2029	C P C G A Q I T G H V K N G S M R I V
Query	6427	GCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTCCATGAGGATCGTG
Sbjct	5459	GCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTCCATGAGGATCGTG

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CDS:non-structural p 1220 C P C G A Q I T G H V K N G S M R I V

CDS:polyprotein [Hep 2049 P R T C S N T W H G T F P I N A Y T T
Query 6487 CTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTACACCACG
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Sbjct 5519 CTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTACACCACG
CDS:non-structural p 1240 P R T C S N T W H G T F P I N A Y T T

CDS:polyprotein [Hep 2069 P C T P S P A P N Y S R A L W R V A A
Query 6547 CCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGTGGCTGCT
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Sbjct 5579 CCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGTGGCTGCT
CDS:non-structural p 1260 P C T P S P A P N Y S R A L W R V A A

CDS:polyprotein [Hep 2089 E Y V E V T R V G D F H Y V T G M T T
Query 6607 AGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCATGACCACT
|||||
Sbjct 5639 AGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCATGACCACT
CDS:non-structural p 1280 E Y V E V T R V G D F H Y V T G M T T

CDS:polyprotein [Hep 2109 N V K C P C Q V P A P E F F T E V D G
Query 6667 ACGTAAAGTGCCCGTGTCTAGGTTCCGGCCCCCGAATTCTTCACAGAAGTGGATGGG
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Sbjct 5699 ACGTAAAGTGCCCGTGTCTAGGTTCCGGCCCCCGAATTCTTCACAGAAGTGGATGGG
CDS:non-structural p 1300 N V K C P C Q V P A P E F F T E V D G

CDS:polyprotein [Hep 2129 R L H R Y A P A C K P L L R E E V T F
Query 6727 GGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGTCACATTC
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Sbjct 5759 GGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGTCACATTC
CDS:non-structural p 1320 R L H R Y A P A C K P L L R E E V T F

CDS:polyprotein [Hep 2149 V G L N Q Y L V G S Q L P C E P E P D
Query 6787 TCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGAACCGGAC
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Sbjct 5819 TCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGAACCGGAC
CDS:non-structural p 1340 V G L N Q Y L V G S Q L P C E P E P D

CDS:polyprotein [Hep 2169 A V L T S M L T D P S H I T A E T A K
Query 6847 CAGTGCTCACTTCCATGCTCACCGACCCCTCCCACATTACGGCGGAGACGGCTAAG
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Sbjct 5879 CAGTGCTCACTTCCATGCTCACCGACCCCTCCCACATTACGGCGGAGACGGCTAAG
CDS:non-structural p 1360 A V L T S M L T D P S H I T A E T A K

CDS:polyprotein [Hep 2189 R L A R G S P P S L A S S S A S Q L S
Query 6907 GGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCAGCTGTCT
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Sbjct 5939 GGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCAGCTGTCT
CDS:non-structural p 1380 R L A R G S P P S L A S S S A S Q L S

CDS:polyprotein [Hep 2209 P S L K A T C T T R H D S P D A D L I
Query 6967 CTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGACGCTGACCTCATC
|||||
Sbjct 5999 CTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGACGCTGACCTCATC
CDS:non-structural p 1400 P S L K A T C T T R H D S P D A D L I

CDS:polyprotein [Hep 2229 A N L L W R Q E M G G N I T R V E S E
Query 7027 CCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGAGTCAGAA
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Sbjct 6059 CCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGAGTCAGAA
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CDS:non-structural p	1420	A N L L W R Q E M G G N I T R V E S E
CDS:polyprotein [Hep	2249	K V V I L D S F E P L Q A E E D E R E
Query	7087	AGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGAGAGGGAA
Sbjct	6119	AGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGAGAGGGAA
CDS:non-structural p	1440	K V V I L D S F E P L Q A E E D E R E
CDS:polyprotein [Hep	2269	S V P A E I L R R S R K F P R A M P I
Query	7147	CCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGATGCCATA
Sbjct	6179	CCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGATGCCATA
CDS:non-structural p	1460	S V P A E I L R R S R K F P R A M P I
CDS:polyprotein [Hep	2289	A R P D Y N P P L L E S W K D P D Y V
Query	7207	CACGCCCGGATTACAACCCTCCACTGTTAGAGTCCTGGAAGGACCCGGACTACGTC
Sbjct	6239	CACGCCCGGATTACAACCCTCCACTGTTAGAGTCCTGGAAGGACCCGGACTACGTC
CDS:non-structural p	1480	A R P D Y N P P L L E S W K D P D Y V
CDS:polyprotein [Hep	2309	P V V H G C P L P P A K A P P I P P P
Query	7267	CAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACCACCTCCA
Sbjct	6299	CAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACCACCTCCA
CDS:non-structural p	1500	P V V H G C P L P P A K A P P I P P P
CDS:polyprotein [Hep	2329	R K R T V V L S E S T V S S A L A E L
Query	7327	GGAAGAGGACGGTTGTCCTGTCTGAGATCTACCGTGTCTTCTGCCTTGGCGGAGCTC
Sbjct	6359	GGAAGAGGACGGTTGTCCTGTCTGAGATCTACCGTGTCTTCTGCCTTGGCGGAGCTC
CDS:non-structural p	1520	R K R T V V L S E S T V S S A L A E L
CDS:polyprotein [Hep	2349	T K T F G S S E S S A V D S G T A T A
Query	7387	CAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTCGACAGCGGCACGGCAACGGCC
Sbjct	6419	CAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTCGACAGCGGCACGGCAACGGCC
CDS:non-structural p	1540	T K T F G S S E S S A V D S G T A T A
CDS:polyprotein [Hep	2369	P D Q P S D D G D A G S D V E S Y S S
Query	7447	CTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTA CTCTCC
Sbjct	6479	CTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTA CTCTCC
CDS:non-structural p	1560	P D Q P S D D G D A G S D V E S Y S S
CDS:polyprotein [Hep	2389	P P L E G E P G D P D L S D G S W S T
Query	7507	CCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTGGTCTACC
Sbjct	6539	CCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTGGTCTACC
CDS:non-structural p	1580	P P L E G E P G D P D L S D G S W S T
CDS:polyprotein [Hep	2409	S E E A S E D V V C C S M S Y T W T G
Query	7567	GCGAGGAGGCTAGTGAGGACGTCGTCTGCTGCTCGATGTCCTACACATGGACAGGC
Sbjct	6599	GCGAGGAGGCTAGTGAGGACGTCGTCTGCTGCTCGATGTCCTACACATGGACAGGC
CDS:non-structural p	1600	S E E A S E D V V C C S M S Y T W T G
CDS:polyprotein [Hep	2429	L I T P C A A E E T K L P I N A L S N
Query	7627	TGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAAC
Sbjct	6659	TGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAAC

CDS:non-structural p	1620	L I T P C A A E E T K L P I N A L S N
CDS:polyprotein [Hep	2449	L L R H H N L V Y A T T S R S A S L R
Query	7687	TGCTCCGTCACCACAACTTGGTCTATGCTACAACATCTCGCAGCGCAAGCCTGCGG
Sbjct	6719	TGCTCCGTCACCACAACTTGGTCTATGCTACAACATCTCGCAGCGCAAGCCTGCGG
CDS:non-structural p	1640	L L R H H N L V Y A T T S R S A S L R
CDS:polyprotein [Hep	2469	K K V T F D R L Q V L D D H Y R D V L
Query	7747	AGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGACGTGCTC
Sbjct	6779	AGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGACGTGCTC
CDS:non-structural p	1660	K K V T F D R L Q V L D D H Y R D V L
CDS:polyprotein [Hep	2489	E M K A K A S T V K A K L L S V E E A
Query	7807	AGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGAGGAAGCC
Sbjct	6839	AGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGAGGAAGCC
CDS:non-structural p	1680	E M K A K A S T V K A K L L S V E E A
CDS:polyprotein [Hep	2509	K L T P P H S A R S K F G Y G A K D V
Query	7867	AGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAAGGACGTC
Sbjct	6899	AGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAAGGACGTC
CDS:non-structural p	1700	K L T P P H S A R S K F G Y G A K D V
CDS:polyprotein [Hep	2529	N L S S K A V N H I R S V W K D L L E
Query	7927	ACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTTGCTGGAA
Sbjct	6959	ACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTTGCTGGAA
CDS:non-structural p	1720	N L S S K A V N H I R S V W K D L L E
CDS:polyprotein [Hep	2549	T E T P I D T T I M A K N E V F C V Q
Query	7987	CTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTTCTGCGTCCAA
Sbjct	7019	CTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTTCTGCGTCCAA
CDS:non-structural p	1740	T E T P I D T T I M A K N E V F C V Q
CDS:polyprotein [Hep	2569	E K G G R K P A R L I V F P D L G V R
Query	8047	AGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCAGATTGAGGTTTCTGCGTCCAA
Sbjct	7079	AGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCAGATTGAGGTTTCTGCGTCCAA
CDS:non-structural p	1760	E K G G R K P A R L I V F P D L G V R
CDS:polyprotein [Hep	2589	C E K M A L Y D V V S T L P Q A V M G
Query	8107	GCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGTGATGGGC
Sbjct	7139	GCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGTGATGGGC
CDS:non-structural p	1780	C E K M A L Y D V V S T L P Q A V M G
CDS:polyprotein [Hep	2609	S Y G F Q Y S P G Q R V E F L V N A W
Query	8167	CATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAATGCCTGG
Sbjct	7199	CATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAATGCCTGG
CDS:non-structural p	1800	S Y G F Q Y S P G Q R V E F L V N A W
CDS:polyprotein [Hep	2629	A K K C P M G F A Y D T R C F D S T V
Query	8227	CGAAGAAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTCAACGGTC
Sbjct	7259	CGAAGAAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTCAACGGTC

CDS:non-structural p	1820	A K K C P M G F A Y D T R C F D S T V
CDS:polyprotein [Hep	2649	E N D I R V E E S I Y Q C C D L A P E
Query	8287	AGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGCCCCCGAA
Sbjct	7319	AGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGCCCCCGAA
CDS:non-structural p	1840	E N D I R V E E S I Y Q C C D L A P E
CDS:polyprotein [Hep	2669	R Q A I R S L T E R L Y I G G P L T N
Query	8347	GACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCTGACTAAT
Sbjct	7379	GACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCTGACTAAT
CDS:non-structural p	1860	R Q A I R S L T E R L Y I G G P L T N
CDS:polyprotein [Hep	2689	K G Q N C G Y R R C R A S G V L T T S
Query	8407	AAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCGAGCGGTGTACTGACGACCAGC
Sbjct	7439	AAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCGAGCGGTGTACTGACGACCAGC
CDS:non-structural p	1880	K G Q N C G Y R R C R A S G V L T T S
CDS:polyprotein [Hep	2709	G N T L T C Y L K A A A A C R A A K L
Query	8467	GTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTCTGAGCTGCGAAGCTC
Sbjct	7499	GTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTCTGAGCTGCGAAGCTC
CDS:non-structural p	1900	G N T L T C Y L K A A A A C R A A K L
CDS:polyprotein [Hep	2729	D C T M L V C G D D L V V I C E S A G
Query	8527	ACTGCACGATGCTCGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAAGCGCGGGG
Sbjct	7559	ACTGCACGATGCTCGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAAGCGCGGGG
CDS:non-structural p	1920	D C T M L V C G D D L V V I C E S A G
CDS:polyprotein [Hep	2749	Q E D E A S L R A F T E A M T R Y S A
Query	8587	AAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATACTCTGCC
Sbjct	7619	AAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATACTCTGCC
CDS:non-structural p	1940	Q E D E A S L R A F T E A M T R Y S A
CDS:polyprotein [Hep	2769	P G D P P K P E Y D L E L I T S C S S
Query	8647	CTGGGGACCCGCCCAAACCAGAATACGACTTGGAGTTGATAACATCATGCTCCTCC
Sbjct	7679	CTGGGGACCCGCCCAAACCAGAATACGACTTGGAGTTGATAACATCATGCTCCTCC
CDS:non-structural p	1960	P G D P P K P E Y D L E L I T S C S S
CDS:polyprotein [Hep	2789	V S V A H D A S G K R V Y Y L T R D P
Query	8707	TGTCAGTCGCGCACGATGCATCTGGCAAAAGGTTGACTATCTCACCCGTGACCCC
Sbjct	7739	TGTCAGTCGCGCACGATGCATCTGGCAAAAGGTTGACTATCTCACCCGTGACCCC
CDS:non-structural p	1980	V S V A H D A S G K R V Y Y L T R D P
CDS:polyprotein [Hep	2809	T P L A R A A W E T A R H T P V N S W
Query	8767	CCCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAATTCCTGG
Sbjct	7799	CCCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAATTCCTGG
CDS:non-structural p	2000	T P L A R A A W E T A R H T P V N S W
CDS:polyprotein [Hep	2829	G N I I M Y A P T L W A R M I L M T H
Query	8827	GCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGATGACTCAT
Sbjct	7859	GCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGATGACTCAT

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CDS:non-structural p 2020 G N I I M Y A P T L W A R M I L M T H
CDS:polyprotein [Hep 2849 F S I L L A Q E Q L E K A L D C Q I Y
Query 8887 TCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAAGCCCTAGATTGTCAGATCTAC
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Sbjct 7919 TCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAAGCCCTAGATTGTCAGATCTAC
CDS:non-structural p 2040 F S I L L A Q E Q L E K A L D C Q I Y
CDS:polyprotein [Hep 2869 A C Y S I E P L D L P Q I I Q R L H G
Query 8947 CCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACTCCATGGC
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Sbjct 7979 CCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACTCCATGGC
CDS:non-structural p 2060 A C Y S I E P L D L P Q I I Q R L H G
CDS:polyprotein [Hep 2889 S A F S L H S Y S P G E I N R V A S C
Query 9007 GCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGC
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Sbjct 8039 GCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGC
CDS:non-structural p 2080 S A F S L H S Y S P G E I N R V A S C
CDS:polyprotein [Hep 2909 R K L G V P P L R V W R H R A R S V R
Query 9067 GGAAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAGTGTCCGC
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Sbjct 8099 GGAAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAGTGTCCGC
CDS:non-structural p 2100 R K L G V P P L R V W R H R A R S V R
CDS:polyprotein [Hep 2929 R L L S Q G G R A A T C G K Y L F N W
Query 9127 GGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGG
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Sbjct 8159 GGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGG
CDS:non-structural p 2120 R L L S Q G G R A A T C G K Y L F N W
CDS:polyprotein [Hep 2949 V R T K L K L T P I P A A S Q L D L S
Query 9187 TAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGATTTATCC
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Sbjct 8219 TAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGATTTATCC
CDS:non-structural p 2140 V R T K L K L T P I P A A S Q L D L S
CDS:polyprotein [Hep 2969 W F V A G Y S G G D I Y H S L S R A R
Query 9247 GGTTTCGTTGCTGGTTACAGCGGGGAGACATATATCACAGCCTGTCTCGTGCCCGA
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Sbjct 8279 GGTTTCGTTGCTGGTTACAGCGGGGAGACATATATCACAGCCTGTCTCGTGCCCGA
CDS:non-structural p 2160 W F V A G Y S G G D I Y H S L S R A R
CDS:polyprotein [Hep 2989 R W F M W C L L L L S V G V G I Y L L
Query 9307 GCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTATCTACTC
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Sbjct 8339 GCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTATCTACTC
CDS:non-structural p 2180 R W F M W C L L L L S V G V G I Y L L
CDS:polyprotein [Hep 3009 N R
Query 9367 ACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 9412
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Sbjct 8399 ACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 8444
CDS:non-structural p 2200 N R
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Score = 696 bits (362), Expect = 0.0
 Identities = 376/376 (100%), Gaps = 0/376 (0%)
 Strand=Plus/Plus

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Query          2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC
                        |||
Sbjct          2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC

Query          62      CTTACGCGAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG
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Sbjct          62      CTTACGCGAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG

Query          122     CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC
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Query          182     ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC
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Sbjct          182     ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC

Query          242     CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA
                        |||
Sbjct          242     CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA

CDS:polyprotein [Hep 1                                     M S T N P K
Query          302     TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
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Sbjct          302     TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
CDS:core-neo fusion 1                                     M S T N P K

CDS:polyprotein [Hep 8      Q R K T K
Query          362     TCAAAGAAAAACCAA 377
                        |||
Sbjct          362     TCAAAGAAAAACCAA 377
CDS:core-neo fusion 8      Q R K T K

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Score = 189 bits (98), Expect = 2e-43
 Identities = 98/98 (100%), Gaps = 0/98 (0%)
 Strand=Plus/Plus

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Query  9508  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT  9567
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Sbjct  8540  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT  8599

Query  9568  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT  9605
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Sbjct  8600  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT  8637

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CPU time: 0.15 user secs. 0.04 sys. secs 0.19 total secs.



Blast 2 Sequences results

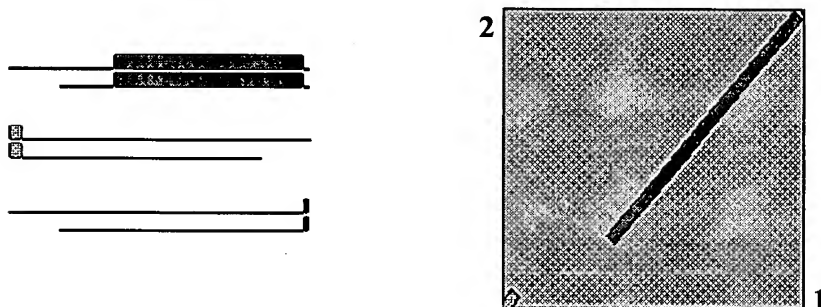
[PubMed](#)[Entrez](#)[BLAST](#)[OMIM](#)[Taxonomy](#)[Structure](#)

BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.17 [Aug-26-2007]

Match: Mismatch: gap open: gap extension:
x_dropoff: expect: wordsize: Filter ☒ View option
Masking character option Masking color option
☒ Show CDS translation

Sequence 1: [gi|5420376|Hepatitis C virus type 1b complete genome, isolate Con1](#)
Length = 9604 (1 .. 9605)

Sequence 2: [gi|5441840|Hepatitis C virus replicon I389/NS3-3'UTR](#)
Length = 8000 (1 .. 8001)



NOTE: Bitscore and expect value are calculated based on the size of the nr database.

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence.

Score = 1.142e+04 bits (5937), Expect = 0.0
Identities = 5993/5993 (100%), Gaps = 0/5993 (0%)
Strand=Plus/Plus

CDS:polyprotein [Hep	1027	A P I T A Y S Q Q T R G L L G C I I T
Query	3420	GCGCCTATTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCAC
Sbjct	1816	GCGCCTATTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCAC
CDS:non-structural p	2	A P I T A Y S Q Q T R G L L G C I I T
CDS:polyprotein [Hep	1047	L T G R D R N Q V E G E V Q V V S T A
Query	3480	CTCACAGGCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGC
Sbjct	1876	CTCACAGGCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGC

CDS:non-structural p	22	L T G R D R N Q V E G E V Q V V S T A
CDS:polyprotein [Hep	1067	Q S F L A T C V N G V C W T V Y H G A
Query	3540	CAATCTTTTCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGC
Sbjct	1936	CAATCTTTTCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGC
CDS:non-structural p	42	Q S F L A T C V N G V C W T V Y H G A
CDS:polyprotein [Hep	1087	S K T L A G P K G P I T Q M Y T N V D
Query	3600	TCAAAGACCCTTGCCGGCCCCAAAGGGGCCAATCACCCAAATGTACACCAATGTGGA
Sbjct	1996	TCAAAGACCCTTGCCGGCCCCAAAGGGGCCAATCACCCAAATGTACACCAATGTGGA
CDS:non-structural p	62	S K T L A G P K G P I T Q M Y T N V D
CDS:polyprotein [Hep	1107	D L V G W Q A P P G A R S L T P C T C
Query	3660	GACCTCGTCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTG
Sbjct	2056	GACCTCGTCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTG
CDS:non-structural p	82	D L V G W Q A P P G A R S L T P C T C
CDS:polyprotein [Hep	1127	S S D L Y L V T R H A D V I P V R R R
Query	3720	AGCTCGGACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCG
Sbjct	2116	AGCTCGGACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCG
CDS:non-structural p	102	S S D L Y L V T R H A D V I P V R R R
CDS:polyprotein [Hep	1147	D S R G S L L S P R P V S Y L K G S S
Query	3780	GACAGCAGGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCG
Sbjct	2176	GACAGCAGGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTC
CDS:non-structural p	122	D S R G S L L S P R P V S Y L K G S S
CDS:polyprotein [Hep	1167	G P L L C P S G H A V G I F R A A V C
Query	3840	GGTCCACTGCTCTGCCCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTG
Sbjct	2236	GGTCCACTGCTCTGCCCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTG
CDS:non-structural p	142	G P L L C P S G H A V G I F R A A V C
CDS:polyprotein [Hep	1187	R G V A K A V D F V P V E S M E T T M
Query	3900	CGAGGGGTTCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTAT
Sbjct	2296	CGAGGGGTTCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTAT
CDS:non-structural p	162	R G V A K A V D F V P V E S M E T T M
CDS:polyprotein [Hep	1207	S P V F T D N S S P P A V P Q T F Q V
Query	3960	TCCCCGGTCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGT
Sbjct	2356	TCCCCGGTCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGT
CDS:non-structural p	182	S P V F T D N S S P P A V P Q T F Q V
CDS:polyprotein [Hep	1227	H L H A P T G S G K S T K V P A A Y A
Query	4020	CATCTACACGCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGC
Sbjct	2416	CATCTACACGCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGC
CDS:non-structural p	202	H L H A P T G S G K S T K V P A A Y A
CDS:polyprotein [Hep	1247	Q G Y K V L V L N P S V A A T L G F G
Query	4080	CAAGGGTATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGG
Sbjct	2476	CAAGGGTATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGG

CDS:non-structural p	222	Q G Y K V L V L N P S V A A T L G F G
CDS:polyprotein [Hep Query]	1267 4140	Y M S K A H G I D P N I R T G V R T I TATATGTCTAAGGCACATGGTATCGACCCTAACATCAGAACCGGGGTAAGGACCAT
Sbjct	2536	TATATGTCTAAGGCACATGGTATCGACCCTAACATCAGAACCGGGGTAAGGACCAT
CDS:non-structural p	242	Y M S K A H G I D P N I R T G V R T I
CDS:polyprotein [Hep Query]	1287 4200	T G A P I T Y S T Y G K F L A D G G C ACGGGTGCCCCCATCACGTACTCCACCTATGGCAAGTTTCTTGCCGACGGTGGTTG
Sbjct	2596	ACGGGTGCCCCCATCACGTACTCCACCTATGGCAAGTTTCTTGCCGACGGTGGTTG
CDS:non-structural p	262	T G A P I T Y S T Y G K F L A D G G C
CDS:polyprotein [Hep Query]	1307 4260	G G A Y D I I I C D E C H S T D S T T GGGGGCGCCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCAC
Sbjct	2656	GGGGGCGCCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCAC
CDS:non-structural p	282	G G A Y D I I I C D E C H S T D S T T
CDS:polyprotein [Hep Query]	1327 4320	L G I G T V L D Q A E T A G A R L V V CTGGGCATCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGCGACTCGTCGT
Sbjct	2716	CTGGGCATCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGCGACTCGTCGT
CDS:non-structural p	302	L G I G T V L D Q A E T A G A R L V V
CDS:polyprotein [Hep Query]	1347 4380	A T A T P P G S V T V P H P N I E E V GCCACCGCTACGCCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGT
Sbjct	2776	GCCACCGCTACGCCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGT
CDS:non-structural p	322	A T A T P P G S V T V P H P N I E E V
CDS:polyprotein [Hep Query]	1367 4440	L S S T G E I P F Y G K A I P I E T I CTGTCCAGCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCAT
Sbjct	2836	CTGTCCAGCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCAT
CDS:non-structural p	342	L S S T G E I P F Y G K A I P I E T I
CDS:polyprotein [Hep Query]	1387 4500	G G R H L I F C H S K K K C D E L A A GGGGGGAGGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGC
Sbjct	2896	GGGGGGAGGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGC
CDS:non-structural p	362	G G R H L I F C H S K K K C D E L A A
CDS:polyprotein [Hep Query]	1407 4560	L S G L G L N A V A Y Y R G L D V S V CTGTCCGGCCTCGGACTCAATGCTGTAGCATATTACCGGGGCCTTGATGTATCCGT
Sbjct	2956	CTGTCCGGCCTCGGACTCAATGCTGTAGCATATTACCGGGGCCTTGATGTATCCGT
CDS:non-structural p	382	L S G L G L N A V A Y Y R G L D V S V
CDS:polyprotein [Hep Query]	1427 4620	P T S G D V I V V A T D A L M T G F T CCAACTAGCGGAGACGTCATTGTCTAGCAACGGACGCTCTAATGACGGGCTTTAC
Sbjct	3016	CCAACTAGCGGAGACGTCATTGTCTAGCAACGGACGCTCTAATGACGGGCTTTAC
CDS:non-structural p	402	P T S G D V I V V A T D A L M T G F T
CDS:polyprotein [Hep Query]	1447 4680	D F D S V I D C N T C V T Q T V D F S GATTTGACTCAGTGATCGACTGCAATACATGTGTACCCAGACAGTCGACTTCAG
Sbjct	3076	GATTTGACTCAGTGATCGACTGCAATACATGTGTACCCAGACAGTCGACTTCAG

CDS:non-structural p	422	D F D S V I D C N T C V T Q T V D F S
CDS:polyprotein [Hep	1467	D P T F T I E T T T V P Q D A V S R S
Query	4740	GACCCGACCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTC
Sbjct	3136	GACCCGACCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTC
CDS:non-structural p	442	D P T F T I E T T T V P Q D A V S R S
CDS:polyprotein [Hep	1487	R R G R T G R G R M G I Y R F V T P G
Query	4800	CGGCGAGGCAGGACTGGTAGGGGCAGGATGGGCATTTACAGTTTGTGACTCCAGG
Sbjct	3196	CGGCGAGGCAGGACTGGTAGGGGCAGGATGGGCATTTACAGTTTGTGACTCCAGG
CDS:non-structural p	462	R R G R T G R G R M G I Y R F V T P G
CDS:polyprotein [Hep	1507	R P S G M F D S S V L C E C Y D A G C
Query	4860	CGGCCCTCGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTG
Sbjct	3256	CGGCCCTCGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTG
CDS:non-structural p	482	R P S G M F D S S V L C E C Y D A G C
CDS:polyprotein [Hep	1527	W Y E L T P A E T S V R L R A Y L N T
Query	4920	TGGTACGAGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACAC
Sbjct	3316	TGGTACGAGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACAC
CDS:non-structural p	502	W Y E L T P A E T S V R L R A Y L N T
CDS:polyprotein [Hep	1547	G L P V C Q D H L E F W E S V F T G L
Query	4980	GGGTTGCCCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCT
Sbjct	3376	GGGTTGCCCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCT
CDS:non-structural p	522	G L P V C Q D H L E F W E S V F T G L
CDS:polyprotein [Hep	1567	H I D A H F L S Q T K Q A G D N F P Y
Query	5040	CACATAGACGCCCATTTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCCTA
Sbjct	3436	CACATAGACGCCCATTTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCCTA
CDS:non-structural p	542	H I D A H F L S Q T K Q A G D N F P Y
CDS:polyprotein [Hep	1587	V A Y Q A T V C A R A Q A P P P S W D
Query	5100	GTAGCATACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGA
Sbjct	3496	GTAGCATACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGA
CDS:non-structural p	562	V A Y Q A T V C A R A Q A P P P S W D
CDS:polyprotein [Hep	1607	M W K C L I R L K P T L H G P T P L L
Query	5160	ATGTGGAAGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCTGCT
Sbjct	3556	ATGTGGAAGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCTGCT
CDS:non-structural p	582	M W K C L I R L K P T L H G P T P L L
CDS:polyprotein [Hep	1627	R L G A V Q N E V T T T H P I T K Y I
Query	5220	AGGCTGGGAGCCGTTCAAACGAGGTTACTACCACACACCCCATACCAAATACAT
Sbjct	3616	AGGCTGGGAGCCGTTCAAACGAGGTTACTACCACACACCCCATACCAAATACAT
CDS:non-structural p	602	R L G A V Q N E V T T T H P I T K Y I
CDS:polyprotein [Hep	1647	A C M S A D L E V V T S T W V L V G G
Query	5280	GCATGCATGTGCGGCTGACCTGGAGGTCGTACGAGCACCTGGGTGCTGGTAGGCGG
Sbjct	3676	GCATGCATGTGCGGCTGACCTGGAGGTCGTACGAGCACCTGGGTGCTGGTAGGCGG

CDS:non-structural p	622	A C M S A D L E V V T S T W V L V G G
CDS:polyprotein [Hep Query]	1667 5340	L A A L A A Y C L T T G S V V I V G R CTAGCAGCTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCGAG
Sbjct	3736	CTAGCAGCTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCGAG
CDS:non-structural p	642	L A A L A A Y C L T T G S V V I V G R
CDS:polyprotein [Hep Query]	1687 5400	I L S G K P A I I P D R E V L Y R E F ATCTTGTCCGGAAGCCGGCCATCATTCCTCCGACAGGGAAGTCCTTTACCGGGAGTT
Sbjct	3796	ATCTTGTCCGGAAGCCGGCCATCATTCCTCCGACAGGGAAGTCCTTTACCGGGAGTT
CDS:non-structural p	662	I L S G K P A I I P D R E V L Y R E F
CDS:polyprotein [Hep Query]	1707 5460	E M E E C A S H L P Y I E Q G M Q L A GAGATGGAAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGC
Sbjct	3856	GAGATGGAAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGC
CDS:non-structural p	682	E M E E C A S H L P Y I E Q G M Q L A
CDS:polyprotein [Hep Query]	1727 5520	Q F K Q K A I G L L Q T A T K Q A E A CAATTCAAACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGC
Sbjct	3916	CAATTCAAACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGC
CDS:non-structural p	702	Q F K Q K A I G L L Q T A T K Q A E A
CDS:polyprotein [Hep Query]	1747 5580	A P V V E S K W R T L E A F W A K H M GCTCCCGTGGTGGAAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATAT
Sbjct	3976	GCTCCCGTGGTGGAAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATAT
CDS:non-structural p	722	A P V V E S K W R T L E A F W A K H M
CDS:polyprotein [Hep Query]	1767 5640	N F I S G I Q Y L A G L S T L P G N P AATTTCATCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCC
Sbjct	4036	AATTTCATCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCC
CDS:non-structural p	742	N F I S G I Q Y L A G L S T L P G N P
CDS:polyprotein [Hep Query]	1787 5700	I A S L M A F T A S I T S P L T T Q H ATAGCATCACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACA
Sbjct	4096	ATAGCATCACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACA
CDS:non-structural p	762	I A S L M A F T A S I T S P L T T Q H
CDS:polyprotein [Hep Query]	1807 5760	L L F N I L G G W V A A Q L A P P S A CTCCTGTTTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGC
Sbjct	4156	CTCCTGTTTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGC
CDS:non-structural p	782	L L F N I L G G W V A A Q L A P P S A
CDS:polyprotein [Hep Query]	1827 5820	S A F V G A G I A G A A V G S I G L G TCTGCTTTCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGG
Sbjct	4216	TCTGCTTTCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGG
CDS:non-structural p	802	S A F V G A G I A G A A V G S I G L G
CDS:polyprotein [Hep Query]	1847 5880	V L V D I L A G Y G A G V A G A L V A GTGCTTGTGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGC
Sbjct	4276	GTGCTTGTGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGC

CDS:non-structural p	822	V L V D I L A G Y G A G V A G A L V A
CDS:polyprotein [Hep	1867	K V M S G E M P S T E D L V N L L P A
Query	5940	AAGGTCATGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGC
Sbjct	4336	AAGGTCATGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGC
CDS:non-structural p	842	K V M S G E M P S T E D L V N L L P A
CDS:polyprotein [Hep	1887	L S P G A L V V G V V C A A I L R R H
Query	6000	CTCTCCCCTGGCGCCCTAGTCGTCGGGGTCGTGTGCGCAGCGATACTGCGTCGGCA
Sbjct	4396	CTCTCCCCTGGCGCCCTAGTCGTCGGGGTCGTGTGCGCAGCGATACTGCGTCGGCA
CDS:non-structural p	862	L S P G A L V V G V V C A A I L R R H
CDS:polyprotein [Hep	1907	G P G E G A V Q W M N R L I A F A S R
Query	6060	GGCCCAGGGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTCGCTTCGCG
Sbjct	4456	GGCCCAGGGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTCGCTTCGCG
CDS:non-structural p	882	G P G E G A V Q W M N R L I A F A S R
CDS:polyprotein [Hep	1927	N H V S P T H Y V P E S D A A A R V T
Query	6120	AACCACGTCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCAC
Sbjct	4516	AACCACGTCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCAC
CDS:non-structural p	902	N H V S P T H Y V P E S D A A A R V T
CDS:polyprotein [Hep	1947	I L S S L T I T Q L L K R L H Q W I N
Query	6180	ATCCTCTCTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAAGTGGATCAA
Sbjct	4576	ATCCTCTCTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAAGTGGATCAA
CDS:non-structural p	922	I L S S L T I T Q L L K R L H Q W I N
CDS:polyprotein [Hep	1967	D C S T P C S G S W L R D V W D W I C
Query	6240	GACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATG
Sbjct	4636	GACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATG
CDS:non-structural p	942	D C S T P C S G S W L R D V W D W I C
CDS:polyprotein [Hep	1987	V L T D F K T W L Q S K L L P R L P G
Query	6300	GTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGG
Sbjct	4696	GTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGG
CDS:non-structural p	962	V L T D F K T W L Q S K L L P R L P G
CDS:polyprotein [Hep	2007	P F F S C Q R G Y K G V W R G D G I M
Query	6360	CCCTTCTTCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCAT
Sbjct	4756	CCCTTCTTCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCAT
CDS:non-structural p	982	P F F S C Q R G Y K G V W R G D G I M
CDS:polyprotein [Hep	2027	T T C P C G A Q I T G H V K N G S M R
Query	6420	ACCACCTGCCCATGTGGAGCACAGATCACCGGACATGTGAAAACGGTTCCATGAG
Sbjct	4816	ACCACCTGCCCATGTGGAGCACAGATCACCGGACATGTGAAAACGGTTCCATGAG
CDS:non-structural p	1002	T T C P C G A Q I T G H V K N G S M R
CDS:polyprotein [Hep	2047	V G P R T C S N T W H G T F P I N A Y
Query	6480	GTGGGGCCTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTA
Sbjct	4876	GTGGGGCCTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTA

CDS:non-structural p	1022	V G P R T C S N T W H G T F P I N A Y
CDS:polyprotein [Hep	2067	T G P C T P S P A P N Y S R A L W R V
Query	6540	ACGGGGCCCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGT
Sbjct	4936	ACGGGGCCCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGT
CDS:non-structural p	1042	T G P C T P S P A P N Y S R A L W R V
CDS:polyprotein [Hep	2087	A E E Y V E V T R V G D F H Y V T G M
Query	6600	GCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCAT
Sbjct	4996	GCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCAT
CDS:non-structural p	1062	A E E Y V E V T R V G D F H Y V T G M
CDS:polyprotein [Hep	2107	T D N V K C P C Q V P A P E F F T E V
Query	6660	ACTGACAACGTAAAGTGCCCGTGTGAGGTTCCGGCCCCCGAATTCTTCACAGAAGT
Sbjct	5056	ACTGACAACGTAAAGTGCCCGTGTGAGGTTCCGGCCCCCGAATTCTTCACAGAAGT
CDS:non-structural p	1082	T D N V K C P C Q V P A P E F F T E V
CDS:polyprotein [Hep	2127	G V R L H R Y A P A C K P L L R E E V
Query	6720	GGGGTGCGGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGT
Sbjct	5116	GGGGTGCGGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGT
CDS:non-structural p	1102	G V R L H R Y A P A C K P L L R E E V
CDS:polyprotein [Hep	2147	F L V G L N Q Y L V G S Q L P C E P E
Query	6780	TTCCTGGTCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGA
Sbjct	5176	TTCCTGGTCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGA
CDS:non-structural p	1122	F L V G L N Q Y L V G S Q L P C E P E
CDS:polyprotein [Hep	2167	D V A V L T S M L T D P S H I T A E T
Query	6840	GACGTAGCAGTGCTCACTTCCATGCTCACCAGCCCCTCCACATTACGGCGGAGAC
Sbjct	5236	GACGTAGCAGTGCTCACTTCCATGCTCACCAGCCCCTCCACATTACGGCGGAGAC
CDS:non-structural p	1142	D V A V L T S M L T D P S H I T A E T
CDS:polyprotein [Hep	2187	K R R L A R G S P P S L A S S S A S Q
Query	6900	AAGCGTAGGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCA
Sbjct	5296	AAGCGTAGGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCA
CDS:non-structural p	1162	K R R L A R G S P P S L A S S S A S Q
CDS:polyprotein [Hep	2207	S A P S L K A T C T T R H D S P D A D
Query	6960	TCTGCGCCTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGGACGCTGA
Sbjct	5356	TCTGCGCCTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGGACGCTGA
CDS:non-structural p	1182	S A P S L K A T C T T R H D S P D A D
CDS:polyprotein [Hep	2227	I E A N L L W R Q E M G G N I T R V E
Query	7020	ATCGAGGCCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGA
Sbjct	5416	ATCGAGGCCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGA
CDS:non-structural p	1202	I E A N L L W R Q E M G G N I T R V E
CDS:polyprotein [Hep	2247	E N K V V I L D S F E P L Q A E E D E
Query	7080	GAAAATAAGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGA
Sbjct	5476	GAAAATAAGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGA

CDS:non-structural p	1222	E N K V V I L D S F E P L Q A E E D E
CDS:polyprotein [Hep	2267	E V S V P A E I L R R S R K F P R A M
Query	7140	GAAGTATCCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGAT
Sbjct	5536	GAAGTATCCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGAT
CDS:non-structural p	1242	E V S V P A E I L R R S R K F P R A M
CDS:polyprotein [Hep	2287	I W A R P D Y N P P L L E S W K D P D
Query	7200	ATATGGGCACGCCCCGATTACAACCCTCCACTGTTAGAGTCCTGGAAGGACCCGGA
Sbjct	5596	ATATGGGCACGCCCCGATTACAACCCTCCACTGTTAGAGTCCTGGAAGGACCCGGA
CDS:non-structural p	1262	I W A R P D Y N P P L L E S W K D P D
CDS:polyprotein [Hep	2307	V P P V V H G C P L P P A K A P P I P
Query	7260	GTCCCTCCAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACC
Sbjct	5656	GTCCCTCCAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACC
CDS:non-structural p	1282	V P P V V H G C P L P P A K A P P I P
CDS:polyprotein [Hep	2327	P R R K R T V V L S E S T V S S A L A
Query	7320	CCACGGAGGAAGAGGACGGTTGTCTGTGAGAATCTACCGTGTCTTCTGCCTTGGC
Sbjct	5716	CCACGGAGGAAGAGGACGGTTGTCTGTGAGAATCTACCGTGTCTTCTGCCTTGGC
CDS:non-structural p	1302	P R R K R T V V L S E S T V S S A L A
CDS:polyprotein [Hep	2347	L A T K T F G S S E S S A V D S G T A
Query	7380	CTCGCCACAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTGACAGCGGCACGGC
Sbjct	5776	CTCGCCACAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTGACAGCGGCACGGC
CDS:non-structural p	1322	L A T K T F G S S E S S A V D S G T A
CDS:polyprotein [Hep	2367	A S P D Q P S D D G D A G S D V E S Y
Query	7440	GCCTCTCCTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTA
Sbjct	5836	GCCTCTCCTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTA
CDS:non-structural p	1342	A S P D Q P S D D G D A G S D V E S Y
CDS:polyprotein [Hep	2387	S M P P L E G E P G D P D L S D G S W
Query	7500	TCCATGCCCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTG
Sbjct	5896	TCCATGCCCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTG
CDS:non-structural p	1362	S M P P L E G E P G D P D L S D G S W
CDS:polyprotein [Hep	2407	T V S E E A S E D V V C C S M S Y T W
Query	7560	ACCGTAAGCGAGGAGGCTAGTGAGGACGTCGTCGCTGCTCGATGTCCTACACATG
Sbjct	5956	ACCGTAAGCGAGGAGGCTAGTGAGGACGTCGTCGCTGCTCGATGTCCTACACATG
CDS:non-structural p	1382	T V S E E A S E D V V C C S M S Y T W
CDS:polyprotein [Hep	2427	G A L I T P C A A E E T K L P I N A L
Query	7620	GGCGCCCTGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACT
Sbjct	6016	GGCGCCCTGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACT
CDS:non-structural p	1402	G A L I T P C A A E E T K L P I N A L
CDS:polyprotein [Hep	2447	N S L L R H H N L V Y A T T S R S A S
Query	7680	AACTCTTTGCTCCGTCAACCAACTTGGTCTATGCTACAACATCTCGCAGCGCAAG
Sbjct	6076	AACTCTTTGCTCCGTCAACCAACTTGGTCTATGCTACAACATCTCGCAGCGCAAG

CDS:non-structural p	1422	N S L L R H H N L V Y A T T S R S A S
CDS:polyprotein [Hep Query	2467 7740	R Q K K V T F D R L Q V L D D H Y R D CGGCAGAAGAAGGTCACCTTTGACAGACTGCAGGTCTGGACGACCACTACCGGGA
Sbjct	6136	CGGCAGAAGAAGGTCACCTTTGACAGACTGCAGGTCTGGACGACCACTACCGGGA
CDS:non-structural p	1442	R Q K K V T F D R L Q V L D D H Y R D
CDS:polyprotein [Hep Query	2487 7800	L K E M K A K A S T V K A K L L S V E CTCAAGGAGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAACTTCTATCCGTGGA
Sbjct	6196	CTCAAGGAGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAACTTCTATCCGTGGA
CDS:non-structural p	1462	L K E M K A K A S T V K A K L L S V E
CDS:polyprotein [Hep Query	2507 7860	A C K L T P P H S A R S K F G Y G A K GCCTGTAAGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAA
Sbjct	6256	GCCTGTAAGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAA
CDS:non-structural p	1482	A C K L T P P H S A R S K F G Y G A K
CDS:polyprotein [Hep Query	2527 7920	V R N L S S K A V N H I R S V W K D L GTCCGGAACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTT
Sbjct	6316	GTCCGGAACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTT
CDS:non-structural p	1502	V R N L S S K A V N H I R S V W K D L
CDS:polyprotein [Hep Query	2547 7980	E D T E T P I D T T I M A K N E V F C GAAGACACTGAGACACCAATTGACACCACCATCATGGCAAAAAATGAGGTTTTCTG
Sbjct	6376	GAAGACACTGAGACACCAATTGACACCACCATCATGGCAAAAAATGAGGTTTTCTG
CDS:non-structural p	1522	E D T E T P I D T T I M A K N E V F C
CDS:polyprotein [Hep Query	2567 8040	Q P E K G G R K P A R L I V F P D L G CAACCAGAGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCCCAGATTGTTGGG
Sbjct	6436	CAACCAGAGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCCCAGATTGTTGGG
CDS:non-structural p	1542	Q P E K G G R K P A R L I V F P D L G
CDS:polyprotein [Hep Query	2587 8100	R V C E K M A L Y D V V S T L P Q A V CGTGTGTGCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGT
Sbjct	6496	CGTGTGTGCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGT
CDS:non-structural p	1562	R V C E K M A L Y D V V S T L P Q A V
CDS:polyprotein [Hep Query	2607 8160	G S S Y G F Q Y S P G Q R V E F L V N GGCTCTTCATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAA
Sbjct	6556	GGCTCTTCATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAA
CDS:non-structural p	1582	G S S Y G F Q Y S P G Q R V E F L V N
CDS:polyprotein [Hep Query	2627 8220	W K A K K C P M G F A Y D T R C F D S TGGAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTC
Sbjct	6616	TGGAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTC
CDS:non-structural p	1602	W K A K K C P M G F A Y D T R C F D S
CDS:polyprotein [Hep Query	2647 8280	V T E N D I R V E E S I Y Q C C D L A GTCAGTGAGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGC
Sbjct	6676	GTCAGTGAGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGC

CDS:non-structural p	1622	V T E N D I R V E E S I Y Q C C D L A
CDS:polyprotein [Hep	2667	E A R Q A I R S L T E R L Y I G G P L
Query	8340	GAAGCCAGACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCT
Sbjct	6736	GAAGCCAGACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCT
CDS:non-structural p	1642	E A R Q A I R S L T E R L Y I G G P L
CDS:polyprotein [Hep	2687	N S K G Q N C G Y R R C R A S G V L T
Query	8400	AATTCTAAAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGAGCGGTGTACTGAC
Sbjct	6796	AATTCTAAAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGAGCGGTGTACTGAC
CDS:non-structural p	1662	N S K G Q N C G Y R R C R A S G V L T
CDS:polyprotein [Hep	2707	S C G N T L T C Y L K A A A A C R A A
Query	8460	AGCTGCGGTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGC
Sbjct	6856	AGCTGCGGTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGC
CDS:non-structural p	1682	S C G N T L T C Y L K A A A A C R A A
CDS:polyprotein [Hep	2727	L Q D C T M L V C G D D L V V I C E S
Query	8520	CTCCAGGACTGCACGATGCTCGTATGCGGAGACGACCTTGTCGTTATCTGTGAAAG
Sbjct	6916	CTCCAGGACTGCACGATGCTCGTATGCGGAGACGACCTTGTCGTTATCTGTGAAAG
CDS:non-structural p	1702	L Q D C T M L V C G D D L V V I C E S
CDS:polyprotein [Hep	2747	G T Q E D E A S L R A F T E A M T R Y
Query	8580	GGGACCCAAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATA
Sbjct	6976	GGGACCCAAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATA
CDS:non-structural p	1722	G T Q E D E A S L R A F T E A M T R Y
CDS:polyprotein [Hep	2767	A P P G D P P K P E Y D L E L I T S C
Query	8640	GGGGGGCTGGGGACCGGCCAAACCAGAATACGACTTGGAGTTGATAACATCATG
Sbjct	7036	GGGGGGCTGGGGACCGGCCAAACCAGAATACGACTTGGAGTTGATAACATCATG
CDS:non-structural p	1742	A P P G D P P K P E Y D L E L I T S C
CDS:polyprotein [Hep	2787	S N V S V A H D A S G K R V Y Y L T R
Query	8700	TCCAATGTGTGAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCG
Sbjct	7096	TCCAATGTGTGAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCG
CDS:non-structural p	1762	S N V S V A H D A S G K R V Y Y L T R
CDS:polyprotein [Hep	2807	P T T P L A R A A W E T A R H T P V N
Query	8760	CCCACCACCCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAA
Sbjct	7156	CCCACCACCCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAA
CDS:non-structural p	1782	P T T P L A R A A W E T A R H T P V N
CDS:polyprotein [Hep	2827	W L G N I I M Y A P T L W A R M I L M
Query	8820	TGGCTAGGCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGAT
Sbjct	7216	TGGCTAGGCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGAT
CDS:non-structural p	1802	W L G N I I M Y A P T L W A R M I L M
CDS:polyprotein [Hep	2847	H F F S I L L A Q E Q L E K A L D C Q
Query	8880	CATTTCTTCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAGCCCTAGATTGTCA
Sbjct	7276	CATTTCTTCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAGCCCTAGATTGTCA

CDS:non-structural p	1822	H F F S I L L A Q E Q L E K A L D C Q
CDS:polyprotein [Hep	2867	Y G A C Y S I E P L D L P Q I I Q R L
Query	8940	TACGGGGCCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACT
Sbjct	7336	TACGGGGCCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACT
CDS:non-structural p	1842	Y G A C Y S I E P L D L P Q I I Q R L
CDS:polyprotein [Hep	2887	G L S A F S L H S Y S P G E I N R V A
Query	9000	GGCCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGC
Sbjct	7396	GGCCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGC
CDS:non-structural p	1862	G L S A F S L H S Y S P G E I N R V A
CDS:polyprotein [Hep	2907	C L R K L G V P P L R V W R H R A R S
Query	9060	TGCCTCAGGAAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAG
Sbjct	7456	TGCCTCAGGAAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAG
CDS:non-structural p	1882	C L R K L G V P P L R V W R H R A R S
CDS:polyprotein [Hep	2927	R A R L L S Q G G R A A T C G K Y L F
Query	9120	CGCGCTAGGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTT
Sbjct	7516	CGCGCTAGGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTT
CDS:non-structural p	1902	R A R L L S Q G G R A A T C G K Y L F
CDS:polyprotein [Hep	2947	W A V R T K L K L T P I P A A S Q L D
Query	9180	TGGGCAGTAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGA
Sbjct	7576	TGGGCAGTAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGA
CDS:non-structural p	1922	W A V R T K L K L T P I P A A S Q L D
CDS:polyprotein [Hep	2967	S S W F V A G Y S G G D I Y H S L S R
Query	9240	TCCAGCTGGTTCGTTGCTGGTTACAGCGGGGGAGACATATATCACAGCCTGTCTCG
Sbjct	7636	TCCAGCTGGTTCGTTGCTGGTTACAGCGGGGGAGACATATATCACAGCCTGTCTCG
CDS:non-structural p	1942	S S W F V A G Y S G G D I Y H S L S R
CDS:polyprotein [Hep	2987	R P R W F M W C L L L L S V G V G I Y
Query	9300	CGACCCCGCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTA
Sbjct	7696	CGACCCCGCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTA
CDS:non-structural p	1962	R P R W F M W C L L L L S V G V G I Y
CDS:polyprotein [Hep	3007	L P N R
Query	9360	CTCCCCAACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 9
Sbjct	7756	CTCCCCAACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 7
CDS:non-structural p	1982	L P N R



Score = 719 bits (374), Expect = 0.0
 Identities = 388/388 (100%), Gaps = 0/388 (0%)
 Strand=Plus/Plus

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Query          2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC
Sbjct          2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC

Query          62      CTTACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG
Sbjct          62      CTTACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG

Query          122     CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC
Sbjct          122     CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC

Query          182     ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC
Sbjct          182     ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC

Query          242     CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA
Sbjct          242     CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA

CDS:polyprotein [Hep 1
Query          302     TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGACCATGAGCACGAATCCTAA
Sbjct          302     TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGACCATGAGCACGAATCCTAA
CDS:core-neo fusion 1
                                M S T N P K

CDS:polyprotein [Hep 8      Q R K T K R N T N
Query          362     TCAAAGAAAAACCAAACGTAACACCAAC 389
Sbjct          362     TCAAAGAAAAACCAAACGTAACACCAAC 389
CDS:core-neo fusion 8      Q R K T K R N T N

```

Score = 189 bits (98), Expect = 2e-43
 Identities = 98/98 (100%), Gaps = 0/98 (0%)
 Strand=Plus/Plus

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Query 9508 GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT 9567
Sbjct 7904 GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT 7963

Query 9568 GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT 9605
Sbjct 7964 GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT 8001

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CPU time: 0.15 user secs. 0.05 sys. secs 0.20 total secs.



Blast 2 Sequences results

PubMed

Entrez

BLAST

OMIM

Taxonomy

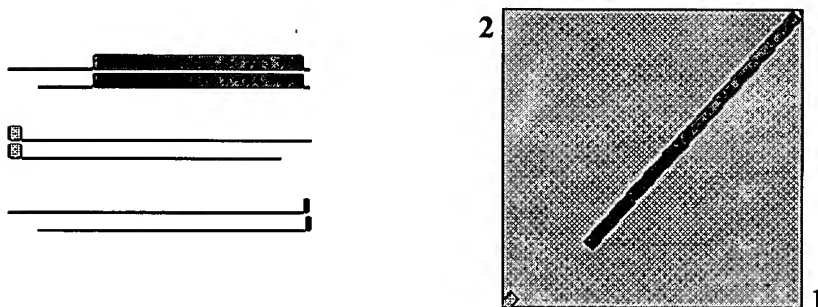
Structure

BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.17 [Aug-26-2007]

Match: Mismatch: gap open: gap extension:
 x_dropoff: expect: wordsize: Filter ☒ View option
 Masking character option Masking color option
☒ Show CDS translation

Sequence 1: [gi|5420376|Hepatitis C virus type 1b complete genome, isolate Con1](#)
 Length = 9604 (1 .. 9605)

Sequence 2: [gi|5441837|Hepatitis C virus replicon I389/NS2-3'UTR](#)
 Length = 8648 (1 .. 8649)



NOTE: Bitscore and expect value are calculated based on the size of the nr database.

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence.



Score = 1.261e+04 bits (6560), Expect = 0.0
 Identities = 6646/6646 (100%), Gaps = 0/6646 (0%)
 Strand=Plus/Plus

CDS:polyprotein [Hep	809	A M D R E M A A S C G G A V F V G L I
Query	2767	CCATGGACCGGGAGATGGCAGCATCGTGCGGAGGCGCGGTTTTTCGTAGGTCTGATA
Sbjct	1811	CCATGGACCGGGAGATGGCAGCATCGTGCGGAGGCGCGGTTTTTCGTAGGTCTGATA
CDS:non-structural p	1	. M D R E M A A S C G G A V F V G L I
CDS:polyprotein [Hep	829	L T L S P H Y K L F L A R L I W W L Q
Query	2827	TGACCTTGTCACCGCACTATAAGCTGTTTCCTCGCTAGGCTCATATGGTGGTTACAA
Sbjct	1871	TGACCTTGTCACCGCACTATAAGCTGTTTCCTCGCTAGGCTCATATGGTGGTTACAA

CDS:non-structural p	20	L T L S P H Y K L F L A R L I W W L Q
CDS:polyprotein [Hep	849	F I T R A E A H L Q V W I P P L N V R
Query	2887	TTATCACCAGGGCCGAGGCACACTTGCAAGTGTGGATCCCCCCCCCTCAACGTTCCGG
Sbjct	1931	TTATCACCAGGGCCGAGGCACACTTGCAAGTGTGGATCCCCCCCCCTCAACGTTCCGG
CDS:non-structural p	40	F I T R A E A H L Q V W I P P L N V R
CDS:polyprotein [Hep	869	G R D A V I L L T C A I H P E L I F T
Query	2947	GCCGCGATGCCGTCATCCTCCTCACGTGCGCGATCCACCCAGAGCTAATCTTTACC
Sbjct	1991	GCCGCGATGCCGTCATCCTCCTCACGTGCGCGATCCACCCAGAGCTAATCTTTACC
CDS:non-structural p	60	G R D A V I L L T C A I H P E L I F T
CDS:polyprotein [Hep	889	T K I L L A I L G P L M V L Q A G I T
Query	3007	CCAAAATCTTGCTCGCCATACTCGGTCCACTCATGGTGCTCCAGGCTGGTATAACC
Sbjct	2051	CCAAAATCTTGCTCGCCATACTCGGTCCACTCATGGTGCTCCAGGCTGGTATAACC
CDS:non-structural p	80	T K I L L A I L G P L M V L Q A G I T
CDS:polyprotein [Hep	909	V P Y F V R A H G L I R A C M L V R K
Query	3067	TGCCGTACTTCGTGCGCGCACACGGGCTCATTCGTGCATGCATGCTGGTGCGGAAG
Sbjct	2111	TGCCGTACTTCGTGCGCGCACACGGGCTCATTCGTGCATGCATGCTGGTGCGGAAG
CDS:non-structural p	100	V P Y F V R A H G L I R A C M L V R K
CDS:polyprotein [Hep	929	A G G H Y V Q M A L M K L A A L T G T
Query	3127	CTGGGGGTCAATTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAGGTACGT
Sbjct	2171	CTGGGGGTCAATTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAGGTACG
CDS:non-structural p	120	A G G H Y V Q M A L M K L A A L T G T
CDS:polyprotein [Hep	949	V Y D H L T P L R D W A H A G L R D L
Query	3187	TTTATGACCATCTCACCCCACTGCGGGACTGGGCCCACGCGGGCCTACGAGACCTT
Sbjct	2231	TTTATGACCATCTCACCCCACTGCGGGACTGGGCCCACGCGGGCCTACGAGACCTT
CDS:non-structural p	140	V Y D H L T P L R D W A H A G L R D L
CDS:polyprotein [Hep	969	V A V E P V V F S D M E T K V I T W G
Query	3247	TGGCAGTTGAGCCCGTCGTCTTCTCTGATATGGAGACCAAGGTTATCACCTGGGGG
Sbjct	2291	TGGCAGTTGAGCCCGTCGTCTTCTCTGATATGGAGACCAAGGTTATCACCTGGGGG
CDS:non-structural p	160	V A V E P V V F S D M E T K V I T W G
CDS:polyprotein [Hep	989	D T A A C G D I I L G L P V S A R R G
Query	3307	ACACCGCGGCGTGTGGGGACATCATCTTGGGCCTGCCCGTCTCCGCCCCGAGGGGG
Sbjct	2351	ACACCGCGGCGTGTGGGGACATCATCTTGGGCCTGCCCGTCTCCGCCCCGAGGGGG
CDS:non-structural p	180	D T A A C G D I I L G L P V S A R R G
CDS:polyprotein [Hep	1009	E I H L G P A D S L E G Q G W R L L A
Query	3367	AGATACATCTGGGACCGGCAGACAGCCTTGAAGGGCAGGGGTGGCGACTCCTCGCG
Sbjct	2411	AGATACATCTGGGACCGGCAGACAGCCTTGAAGGGCAGGGGTGGCGACTCCTCGCG
CDS:non-structural p	200	E I H L G P A D S L E G Q G W R L L A
CDS:polyprotein [Hep	1029	I T A Y S Q Q T R G L L G C I I T S L
Query	3427	TTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCACTAGCCTC
Sbjct	2471	TTACGGCCTACTCCCAACAGACGCGAGGCCTACTTGGCTGCATCATCACTAGCCTC

CDS:non-structural p	220	I T A Y S Q Q T R G L L G C I I T S L
CDS:polyprotein [Hep	1049	G R D R N Q V E G E V Q V V S T A T Q
Query	3487	GCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGCAACACAA
Sbjct	2531	GCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGCAACACAA
CDS:non-structural p	240	G R D R N Q V E G E V Q V V S T A T Q
CDS:polyprotein [Hep	1069	F L A T C V N G V C W T V Y H G A G S
Query	3547	TCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGCCGGCTCA
Sbjct	2591	TCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGCCGGCTCA
CDS:non-structural p	260	F L A T C V N G V C W T V Y H G A G S
CDS:polyprotein [Hep	1089	T L A G P K G P I T Q M Y T N V D Q D
Query	3607	CCCTTGCCGGGCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGACCAGGAC
Sbjct	2651	CCCTTGCCGGGCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGACCAGGAC
CDS:non-structural p	280	T L A G P K G P I T Q M Y T N V D Q D
CDS:polyprotein [Hep	1109	V G W Q A P P G A R S L T P C T C G S
Query	3667	TCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTGCGGCAGC
Sbjct	2711	TCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTGCGGCAGC
CDS:non-structural p	300	V G W Q A P P G A R S L T P C T C G S
CDS:polyprotein [Hep	1129	D L Y L V T R H A D V I P V R R R G D
Query	3727	ACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCGGGGCGAC
Sbjct	2771	ACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCGGGGCGAC
CDS:non-structural p	320	D L Y L V T R H A D V I P V R R R G D
CDS:polyprotein [Hep	1149	R G S L L S P R P V S Y L K G S S G G
Query	3787	GGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCGGGCGGT
Sbjct	2831	GGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCGGGCGGT
CDS:non-structural p	340	R G S L L S P R P V S Y L K G S S G G
CDS:polyprotein [Hep	1169	L L C P S G H A V G I F R A A V C T R
Query	3847	TGCTCTGCCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTGCACCCGA
Sbjct	2891	TGCTCTGCCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTGCACCCGA
CDS:non-structural p	360	L L C P S G H A V G I F R A A V C T R
CDS:polyprotein [Hep	1189	V A K A V D F V P V E S M E T T M R S
Query	3907	TTGCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAACCACTATGCGGTCC
Sbjct	2951	TTGCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAACCACTATGCGGTCC
CDS:non-structural p	380	V A K A V D F V P V E S M E T T M R S
CDS:polyprotein [Hep	1209	V F T D N S S P P A V P Q T F Q V A H
Query	3967	TCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGTGGCCCAT
Sbjct	3011	TCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGTGGCCCAT
CDS:non-structural p	400	V F T D N S S P P A V P Q T F Q V A H
CDS:polyprotein [Hep	1229	H A P T G S G K S T K V P A A Y A A Q
Query	4027	ACGCCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGCAGCCCAA
Sbjct	3071	ACGCCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGCAGCCCAA

CDS:non-structural p	420	H A P T G S G K S T K V P A A Y A A Q
CDS:polyprotein [Hep Query	1249 4087	Y K V L V L N P S V A A T L G F G A Y ATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGGGGCGTAT
Sbjct	3131	ATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGGGGCGTAT
CDS:non-structural p	440	Y K V L V L N P S V A A T L G F G A Y
CDS:polyprotein [Hep Query	1269 4147	S K A H G I D P N I R T G V R T I T T CTAAGGCACATGGTATCGACCCTAACATCAGAACCAGGGGTAAGGACCATCACCACG
Sbjct	3191	CTAAGGCACATGGTATCGACCCTAACATCAGAACCAGGGGTAAGGACCATCACCACG
CDS:non-structural p	460	S K A H G I D P N I R T G V R T I T T
CDS:polyprotein [Hep Query	1289 4207	A P I T Y S T Y G K F L A D G G C S G CCCCCATCACGTACTCCACCTATGGCAAGTTTCTTGCCGACGGTGTTGCTCTGGG
Sbjct	3251	CCCCCATCACGTACTCCACCTATGGCAAGTTTCTTGCCGACGGTGTTGCTCTGGG
CDS:non-structural p	480	A P I T Y S T Y G K F L A D G G C S G
CDS:polyprotein [Hep Query	1309 4267	A Y D I I I C D E C H S T D S T T I L CCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCACTATCCTG
Sbjct	3311	CCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCACTATCCTG
CDS:non-structural p	500	A Y D I I I C D E C H S T D S T T I L
CDS:polyprotein [Hep Query	1329 4327	I G T V L D Q A E T A G A R L V V L A TCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGCGACTCGTCGTGCTCGCC
Sbjct	3371	TCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGCGACTCGTCGTGCTCGCC
CDS:non-structural p	520	I G T V L D Q A E T A G A R L V V L A
CDS:polyprotein [Hep Query	1349 4387	A T P P G S V T V P H P N I E E V A L CTACGCCTCCGGGATCGGTCCACGTGCCACATCCAAACATCGAGGAGGTGGCTCTG
Sbjct	3431	CTACGCCTCCGGGATCGGTCCACGTGCCACATCCAAACATCGAGGAGGTGGCTCTG
CDS:non-structural p	540	A T P P G S V T V P H P N I E E V A L
CDS:polyprotein [Hep Query	1369 4447	S T G E I P F Y G K A I P I E T I K G GCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCATCAAGGGG
Sbjct	3491	GCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCATCAAGGGG
CDS:non-structural p	560	S T G E I P F Y G K A I P I E T I K G
CDS:polyprotein [Hep Query	1389 4507	R H L I F C H S K K K C D E L A A K L GGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGCGAAGCTG
Sbjct	3551	GGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGCGAAGCTG
CDS:non-structural p	580	R H L I F C H S K K K C D E L A A K L
CDS:polyprotein [Hep Query	1409 4567	G L G L N A V A Y Y R G L D V S V I P GCCTCGGACTCAATGCTGTAGCATATTACCGGGGCCTTGATGTATCCGTCATACCA
Sbjct	3611	GCCTCGGACTCAATGCTGTAGCATATTACCGGGGCCTTGATGTATCCGTCATACCA
CDS:non-structural p	600	G L G L N A V A Y Y R G L D V S V I P
CDS:polyprotein [Hep Query	1429 4627	S G D V I V V A T D A L M T G F T G D GCGGAGACGTCATTGTCTGTAGCAACGGACGCTCTAATGACGGGCTTTACCGGCGAT
Sbjct	3671	GCGGAGACGTCATTGTCTGTAGCAACGGACGCTCTAATGACGGGCTTTACCGGCGAT

CDS:non-structural p	620	S G D V I V V A T D A L M T G F T G D
CDS:polyprotein [Hep Query]	1449 4687	D S V I D C N T C V T Q T V D F S L D ACTCAGTGATCGACTGCAATACATGTGTCAACCCAGACAGTCGACTTCAGCCTGGAC
Sbjct	3731	ACTCAGTGATCGACTGCAATACATGTGTCAACCCAGACAGTCGACTTCAGCCTGGAC
CDS:non-structural p	640	D S V I D C N T C V T Q T V D F S L D
CDS:polyprotein [Hep Query]	1469 4747	T F T I E T T T V P Q D A V S R S Q R CCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTCGCAGCGG
Sbjct	3791	CCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTCGCAGCGG
CDS:non-structural p	660	T F T I E T T T V P Q D A V S R S Q R
CDS:polyprotein [Hep Query]	1489 4807	G R T G R G R M G I Y R F V T P G E R GCAGGACTGGTAGGGGCAGGATGGGCATTTACAGGTTTGTGACTCCAGGAGAACGG
Sbjct	3851	GCAGGACTGGTAGGGGCAGGATGGGCATTTACAGGTTTGTGACTCCAGGAGAACGG
CDS:non-structural p	680	G R T G R G R M G I Y R F V T P G E R
CDS:polyprotein [Hep Query]	1509 4867	S G M F D S S V L C E C Y D A G C A W CGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTGTGCTTGG
Sbjct	3911	CGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTGTGCTTGG
CDS:non-structural p	700	S G M F D S S V L C E C Y D A G C A W
CDS:polyprotein [Hep Query]	1529 4927	E L T P A E T S V R L R A Y L N T P G AGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACACACCAGGG
Sbjct	3971	AGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACACACCAGGG
CDS:non-structural p	720	E L T P A E T S V R L R A Y L N T P G
CDS:polyprotein [Hep Query]	1549 4987	P V C Q D H L E F W E S V F T G L T H CCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCTCACCCAC
Sbjct	4031	CCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCTCACCCAC
CDS:non-structural p	740	P V C Q D H L E F W E S V F T G L T H
CDS:polyprotein [Hep Query]	1569 5047	D A H F L S Q T K Q A G D N F P Y L V ACGCCCATTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCTACCTGGTA
Sbjct	4091	ACGCCCATTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCTACCTGGTA
CDS:non-structural p	760	D A H F L S Q T K Q A G D N F P Y L V
CDS:polyprotein [Hep Query]	1589 5107	Y Q A T V C A R A Q A P P P S W D Q M ACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGACCAAATG
Sbjct	4151	ACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGACCAAATG
CDS:non-structural p	780	Y Q A T V C A R A Q A P P P S W D Q M
CDS:polyprotein [Hep Query]	1609 5167	K C L I R L K P T L H G P T P L L Y R AGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCCTGCTGTATAGG
Sbjct	4211	AGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCCTGCTGTATAGG
CDS:non-structural p	800	K C L I R L K P T L H G P T P L L Y R
CDS:polyprotein [Hep Query]	1629 5227	G A V Q N E V T T T H P I T K Y I M A GAGCCGTTCAAACGAGGTTACTACCACACACCCCATACCAAATACATCATGGCA
Sbjct	4271	GAGCCGTTCAAACGAGGTTACTACCACACACCCCATACCAAATACATCATGGCA

CDS:non-structural p	820	G A V Q N E V T T T H P I T K Y I M A
CDS:polyprotein [Hep Query]	1649 5287	M S A D L E V V T S T W V L V G G V L TGTCGGCTGACCTGGAGGTCGTCACGAGCACCTGGGTGCTGGTAGGCGGAGTCCTA
Sbjct	4331	TGTCGGCTGACCTGGAGGTCGTCACGAGCACCTGGGTGCTGGTAGGCGGAGTCCTA
CDS:non-structural p	840	M S A D L E V V T S T W V L V G G V L
CDS:polyprotein [Hep Query]	1669 5347	A L A A Y C L T T G S V V I V G R I I CTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAGGATCATC
Sbjct	4391	CTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAGGATCATC
CDS:non-structural p	860	A L A A Y C L T T G S V V I V G R I I
CDS:polyprotein [Hep Query]	1689 5407	S G K P A I I P D R E V L Y R E F D E CCGGAAAGCCGGCCATCATTCCCACAGGGAAGTCCTTTACCGGGAGTTCGATGAG
Sbjct	4451	CCGGAAAGCCGGCCATCATTCCCACAGGGAAGTCCTTTACCGGGAGTTCGATGAG
CDS:non-structural p	880	S G K P A I I P D R E V L Y R E F D E
CDS:polyprotein [Hep Query]	1709 5467	E E C A S H L P Y I E Q G M Q L A E Q AAGAGTGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGCCGAACAA
Sbjct	4511	AAGAGTGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGCCGAACAA
CDS:non-structural p	900	E E C A S H L P Y I E Q G M Q L A E Q
CDS:polyprotein [Hep Query]	1729 5527	K Q K A I G L L Q T A T K Q A E A A A AACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGCTGCTGCT
Sbjct	4571	AACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGCTGCTGCT
CDS:non-structural p	920	K Q K A I G L L Q T A T K Q A E A A A
CDS:polyprotein [Hep Query]	1749 5587	V V E S K W R T L E A F W A K H M W N TGGTGGAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATATGTGGAAT
Sbjct	4631	TGGTGGAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATATGTGGAAT
CDS:non-structural p	940	V V E S K W R T L E A F W A K H M W N
CDS:polyprotein [Hep Query]	1769 5647	I S G I Q Y L A G L S T L P G N P A I TCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCCCGCGATA
Sbjct	4691	TCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCCCGCGATA
CDS:non-structural p	960	I S G I Q Y L A G L S T L P G N P A I
CDS:polyprotein [Hep Query]	1789 5707	S L M A F T A S I T S P L T T Q H T L CACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACATACCCTC
Sbjct	4751	CACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACATACCCTC
CDS:non-structural p	980	S L M A F T A S I T S P L T T Q H T L
CDS:polyprotein [Hep Query]	1809 5767	F N I L G G W V A A Q L A P P S A A S TTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGCTGCTTCT
Sbjct	4811	TTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGCTGCTTCT
CDS:non-structural p	1000	F N I L G G W V A A Q L A P P S A A S
CDS:polyprotein [Hep Query]	1829 5827	F V G A G I A G A A V G S I G L G K V TCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGGGAAGGTG
Sbjct	4871	TCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGGGAAGGTG

CDS:non-structural p	1020	F V G A G I A G A A V G S I G L G K V
CDS:polyprotein [Hep Query]	1849 5887	V D I L A G Y G A G V A G A L V A F K TGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGCCTTTAAG
Sbjct	4931	TGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGCCTTTAAG
CDS:non-structural p	1040	V D I L A G Y G A G V A G A L V A F K
CDS:polyprotein [Hep Query]	1869 5947	M S G E M P S T E D L V N L L P A I L TGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGCTATCCTC
Sbjct	4991	TGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGCTATCCTC
CDS:non-structural p	1060	M S G E M P S T E D L V N L L P A I L
CDS:polyprotein [Hep Query]	1889 6007	P G A L V V G V V C A A I L R R H V G CTGGCGCCCTAGTCGTCGGGGTTCGTGTGCGCAGCGATACTGCGTCGGGCACGTGGGC
Sbjct	5051	CTGGCGCCCTAGTCGTCGGGGTTCGTGTGCGCAGCGATACTGCGTCGGGCACGTGGGC
CDS:non-structural p	1080	P G A L V V G V V C A A I L R R H V G
CDS:polyprotein [Hep Query]	1909 6067	G E G A V Q W M N R L I A F A S R G N GGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTTCGTTTCGCGGGGTAAC
Sbjct	5111	GGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTTCGTTTCGCGGGGTAAC
CDS:non-structural p	1100	G E G A V Q W M N R L I A F A S R G N
CDS:polyprotein [Hep Query]	1929 6127	V S P T H Y V P E S D A A A R V T Q I TCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCACTCAGATC
Sbjct	5171	TCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCACTCAGATC
CDS:non-structural p	1120	V S P T H Y V P E S D A A A R V T Q I
CDS:polyprotein [Hep Query]	1949 6187	S S L T I T Q L L K R L H Q W I N E D CTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAGTGGATCAACGAGGAC
Sbjct	5231	CTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAGTGGATCAACGAGGAC
CDS:non-structural p	1140	S S L T I T Q L L K R L H Q W I N E D
CDS:polyprotein [Hep Query]	1969 6247	S T P C S G S W L R D V W D W I C T V CCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATGCACGGTG
Sbjct	5291	CCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATGCACGGTG
CDS:non-structural p	1160	S T P C S G S W L R D V W D W I C T V
CDS:polyprotein [Hep Query]	1989 6307	T D F K T W L Q S K L L P R L P G V P CTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGGAGTCCCC
Sbjct	5351	CTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGGAGTCCCC
CDS:non-structural p	1180	T D F K T W L Q S K L L P R L P G V P
CDS:polyprotein [Hep Query]	2009 6367	F S C Q R G Y K G V W R G D G I M Q T TCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCATGCAAACC
Sbjct	5411	TCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCATGCAAACC
CDS:non-structural p	1200	F S C Q R G Y K G V W R G D G I M Q T
CDS:polyprotein [Hep Query]	2029 6427	C P C G A Q I T G H V K N G S M R I V GCCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTCCATGAGGATCGTG
Sbjct	5471	GCCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTCCATGAGGATCGTG

CDS:non-structural p	1220	C P C G A Q I T G H V K N G S M R I V
CDS:polyprotein [Hep Query]	2049 6487	P R T C S N T W H G T F P I N A Y T T CTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTACACCACG
Sbjct	5531	CTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTACACCACG
CDS:non-structural p	1240	P R T C S N T W H G T F P I N A Y T T
CDS:polyprotein [Hep Query]	2069 6547	P C T P S P A P N Y S R A L W R V A A CCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGTGGCTGCT
Sbjct	5591	CCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGTGGCTGCT
CDS:non-structural p	1260	P C T P S P A P N Y S R A L W R V A A
CDS:polyprotein [Hep Query]	2089 6607	E Y V E V T R V G D F H Y V T G M T T AGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCATGACCACT
Sbjct	5651	AGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCATGACCACT
CDS:non-structural p	1280	E Y V E V T R V G D F H Y V T G M T T
CDS:polyprotein [Hep Query]	2109 6667	N V K C P C Q V P A P E F F T E V D G ACGTAAAGTGCCCGTGTGAGGTTCCGGCCCCGAATTCTTCACAGAAGTGGATGGG
Sbjct	5711	ACGTAAAGTGCCCGTGTGAGGTTCCGGCCCCGAATTCTTCACAGAAGTGGATGGG
CDS:non-structural p	1300	N V K C P C Q V P A P E F F T E V D G
CDS:polyprotein [Hep Query]	2129 6727	R L H R Y A P A C K P L L R E E V T F GGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGTACATTC
Sbjct	5771	GGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGTACATTC
CDS:non-structural p	1320	R L H R Y A P A C K P L L R E E V T F
CDS:polyprotein [Hep Query]	2149 6787	V G L N Q Y L V G S Q L P C E P E P D TCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGAACCGGAC
Sbjct	5831	TCGGGCTCAATCAATACCTGGTTGGGTACAGCTCCCATGCGAGCCCGAACCGGAC
CDS:non-structural p	1340	V G L N Q Y L V G S Q L P C E P E P D
CDS:polyprotein [Hep Query]	2169 6847	A V L T S M L T D P S H I T A E T A K CAGTGCTCACTTCCATGCTCACCGACCCCTCCACATTACGGCGGAGACGGCTAAG
Sbjct	5891	CAGTGCTCACTTCCATGCTCACCGACCCCTCCACATTACGGCGGAGACGGCTAAG
CDS:non-structural p	1360	A V L T S M L T D P S H I T A E T A K
CDS:polyprotein [Hep Query]	2189 6907	R L A R G S P P S L A S S S A S Q L S GGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCAGCTGTCT
Sbjct	5951	GGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCAGCTGTCT
CDS:non-structural p	1380	R L A R G S P P S L A S S S A S Q L S
CDS:polyprotein [Hep Query]	2209 6967	P S L K A T C T T R H D S P D A D L I CTTCCTTGAAGGCAACATGCACTACCGTCATGACTCCCCGGACGCTGACCTCATC
Sbjct	6011	CTTCCTTGAAGGCAACATGCACTACCGTCATGACTCCCCGGACGCTGACCTCATC
CDS:non-structural p	1400	P S L K A T C T T R H D S P D A D L I
CDS:polyprotein [Hep Query]	2229 7027	A N L L W R Q E M G G N I T R V E S E CCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGAGTCAGAA
Sbjct	6071	CCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGAGTCAGAA

CDS:non-structural p	1420	A N L L W R Q E M G G N I T R V E S E
CDS:polyprotein [Hep	2249	K V V I L D S F E P L Q A E E D E R E
Query	7087	AGGTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAGCGGAGGAGGATGAGAGGGAA
Sbjct	6131	AGGTAGTAATTTTGGACTCTTTTCGAGCCGCTCCAAGCGGAGGAGGATGAGAGGGAA
CDS:non-structural p	1440	K V V I L D S F E P L Q A E E D E R E
CDS:polyprotein [Hep	2269	S V P A E I L R R S R K F P R A M P I
Query	7147	CCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGATGCCATA
Sbjct	6191	CCGTTCCGGCGGAGATCCTGCGGAGGTCCAGGAAATTCCTCGAGCGATGCCATA
CDS:non-structural p	1460	S V P A E I L R R S R K F P R A M P I
CDS:polyprotein [Hep	2289	A R P D Y N P P L L E S W K D P D Y V
Query	7207	CACGCCCGGATTACAACCTCCACTGTTAGAGTCCTGGAAGGACCGGACTACGTC
Sbjct	6251	CACGCCCGGATTACAACCTCCACTGTTAGAGTCCTGGAAGGACCGGACTACGTC
CDS:non-structural p	1480	A R P D Y N P P L L E S W K D P D Y V
CDS:polyprotein [Hep	2309	P V V H G C P L P P A K A P P I P P P
Query	7267	CAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACCACCTCCA
Sbjct	6311	CAGTGGTACACGGGTGTCCATTGCCGCCTGCCAAGGCCCTCCGATACCACCTCCA
CDS:non-structural p	1500	P V V H G C P L P P A K A P P I P P P
CDS:polyprotein [Hep	2329	R K R T V V L S E S T V S S A L A E L
Query	7327	GGAAGAGGACGGTTGTCTGTCTGAGATCTACCGTGTCTTCTGCCTTGGCGGAGCTC
Sbjct	6371	GGAAGAGGACGGTTGTCTGTCTGAGATCTACCGTGTCTTCTGCCTTGGCGGAGCTC
CDS:non-structural p	1520	R K R T V V L S E S T V S S A L A E L
CDS:polyprotein [Hep	2349	T K T F G S S E S S A V D S G T A T A
Query	7387	CAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTCGACAGCGGCACGGCAACGGCC
Sbjct	6431	CAAAGACCTTCGGCAGCTCCGAATCGTCGGCCGTCGACAGCGGCACGGCAACGGCC
CDS:non-structural p	1540	T K T F G S S E S S A V D S G T A T A
CDS:polyprotein [Hep	2369	P D Q P S D D G D A G S D V E S Y S S
Query	7447	CTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTACTCCTCC
Sbjct	6491	CTGACCAGCCCTCCGACGACGGCGACGCGGGATCCGACGTTGAGTCGTACTCCTCC
CDS:non-structural p	1560	P D Q P S D D G D A G S D V E S Y S S
CDS:polyprotein [Hep	2389	P P L E G E P G D P D L S D G S W S T
Query	7507	CCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTGGTCTACC
Sbjct	6551	CCCCCTTGAGGGGGAGCCGGGGGATCCCGATCTCAGCGACGGGTCTTGGTCTACC
CDS:non-structural p	1580	P P L E G E P G D P D L S D G S W S T
CDS:polyprotein [Hep	2409	S E E A S E D V V C C S M S Y T W T G
Query	7567	GCGAGGAGGCTAGTGAGGACGTCGTCTGCTGCTCGATGTCCTACACATGGACAGGC
Sbjct	6611	GCGAGGAGGCTAGTGAGGACGTCGTCTGCTGCTCGATGTCCTACACATGGACAGGC
CDS:non-structural p	1600	S E E A S E D V V C C S M S Y T W T G
CDS:polyprotein [Hep	2429	L I T P C A A E E T K L P I N A L S N
Query	7627	TGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAAC
Sbjct	6671	TGATCACGCCATGCGCTGCGGAGGAAACCAAGCTGCCCATCAATGCACTGAGCAAC

CDS:non-structural p	1620	L I T P C A A E E T K L P I N A L S N
CDS:polyprotein [Hep Query	2449 7687	L L R H H N L V Y A T T S R S A S L R TGCTCCGTCACCACAACCTTGGTCTATGCTACAACATCTCGCAGCGCAAGCCTGCGG
Sbjct	6731	TGCTCCGTCACCACAACCTTGGTCTATGCTACAACATCTCGCAGCGCAAGCCTGCGG
CDS:non-structural p	1640	L L R H H N L V Y A T T S R S A S L R
CDS:polyprotein [Hep Query	2469 7747	K K V T F D R L Q V L D D H Y R D V L AGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGACGTGCTC
Sbjct	6791	AGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGACGTGCTC
CDS:non-structural p	1660	K K V T F D R L Q V L D D H Y R D V L
CDS:polyprotein [Hep Query	2489 7807	E M K A K A S T V K A K L L S V E E A AGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGAGGAAGCC
Sbjct	6851	AGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGAGGAAGCC
CDS:non-structural p	1680	E M K A K A S T V K A K L L S V E E A
CDS:polyprotein [Hep Query	2509 7867	K L T P P H S A R S K F G Y G A K D V AGCTGACGCCCCCACATTGCGCCAGATCTAAATTTGGCTATGGGGCAAAGGACGTC
Sbjct	6911	AGCTGACGCCCCCACATTGCGCCAGATCTAAATTTGGCTATGGGGCAAAGGACGTC
CDS:non-structural p	1700	K L T P P H S A R S K F G Y G A K D V
CDS:polyprotein [Hep Query	2529 7927	N L S S K A V N H I R S V W K D L L E ACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTTGCTGGAA
Sbjct	6971	ACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTTGCTGGAA
CDS:non-structural p	1720	N L S S K A V N H I R S V W K D L L E
CDS:polyprotein [Hep Query	2549 7987	T E T P I D T T I M A K N E V F C V Q CTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTTCTGCGTCCAA
Sbjct	7031	CTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTTCTGCGTCCAA
CDS:non-structural p	1740	T E T P I D T T I M A K N E V F C V Q
CDS:polyprotein [Hep Query	2569 8047	E K G G R K P A R L I V F P D L G V R AGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCAGATTTGGGGGTTTCGT
Sbjct	7091	AGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCAGATTTGGGGGTTTCGT
CDS:non-structural p	1760	E K G G R K P A R L I V F P D L G V R
CDS:polyprotein [Hep Query	2589 8107	C E K M A L Y D V V S T L P Q A V M G GCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGTGATGGGC
Sbjct	7151	GCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGTGATGGGC
CDS:non-structural p	1780	C E K M A L Y D V V S T L P Q A V M G
CDS:polyprotein [Hep Query	2609 8167	S Y G F Q Y S P G Q R V E F L V N A W CATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAATGCCTGG
Sbjct	7211	CATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAATGCCTGG
CDS:non-structural p	1800	S Y G F Q Y S P G Q R V E F L V N A W
CDS:polyprotein [Hep Query	2629 8227	A K K C P M G F A Y D T R C F D S T V CGAAGAAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTCAACGGTC
Sbjct	7271	CGAAGAAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTTGACTCAACGGTC

CDS:non-structural p	1820	A K K C P M G F A Y D T R C F D S T V
CDS:polyprotein [Hep	2649	E N D I R V E E S I Y Q C C D L A P E
Query	8287	AGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGCCCCCGAA
Sbjct	7331	AGAATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGCCCCCGAA
CDS:non-structural p	1840	E N D I R V E E S I Y Q C C D L A P E
CDS:polyprotein [Hep	2669	R Q A I R S L T E R L Y I G G P L T N
Query	8347	GACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCTGACTAAT
Sbjct	7391	GACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCTGACTAAT
CDS:non-structural p	1860	R Q A I R S L T E R L Y I G G P L T N
CDS:polyprotein [Hep	2689	K G Q N C G Y R R C R A S G V L T T S
Query	8407	AAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCGAGCGGTGTACTGACGACCAGC
Sbjct	7451	AAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCGAGCGGTGTACTGACGACCAGC
CDS:non-structural p	1880	K G Q N C G Y R R C R A S G V L T T S
CDS:polyprotein [Hep	2709	G N T L T C Y L K A A A A C R A A K L
Query	8467	GTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGCGAAGCTC
Sbjct	7511	GTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGCGAAGCTC
CDS:non-structural p	1900	G N T L T C Y L K A A A A C R A A K L
CDS:polyprotein [Hep	2729	D C T M L V C G D D L V V I C E S A G
Query	8527	ACTGCACGATGCTCGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAAGCGCGGGG
Sbjct	7571	ACTGCACGATGCTCGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAAGCGCGGGG
CDS:non-structural p	1920	D C T M L V C G D D L V V I C E S A G
CDS:polyprotein [Hep	2749	Q E D E A S L R A F T E A M T R Y S A
Query	8587	AAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATACTCTGCC
Sbjct	7631	AAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATACTCTGCC
CDS:non-structural p	1940	Q E D E A S L R A F T E A M T R Y S A
CDS:polyprotein [Hep	2769	P G D P P K P E Y D L E L I T S C S S
Query	8647	CTGGGGACCCGCCCAAACCAGAATACGACTTGGAGTTGATAACATCATGCTCCTCC
Sbjct	7691	CTGGGGACCCGCCCAAACCAGAATACGACTTGGAGTTGATAACATCATGCTCCTCC
CDS:non-structural p	1960	P G D P P K P E Y D L E L I T S C S S
CDS:polyprotein [Hep	2789	V S V A H D A S G K R V Y Y L T R D P
Query	8707	TGTCAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCGTGACCCC
Sbjct	7751	TGTCAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCGTGACCCC
CDS:non-structural p	1980	V S V A H D A S G K R V Y Y L T R D P
CDS:polyprotein [Hep	2809	T P L A R A A W E T A R H T P V N S W
Query	8767	CCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAATTCTCTGG
Sbjct	7811	CCCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAATTCTCTGG
CDS:non-structural p	2000	T P L A R A A W E T A R H T P V N S W
CDS:polyprotein [Hep	2829	G N I I M Y A P T L W A R M I L M T H
Query	8827	GCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGATGACTCAT
Sbjct	7871	GCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGATGACTCAT

CDS:non-structural p	2020	G N I I M Y A P T L W A R M I L M T H	
CDS:polyprotein [Hep	2849	F S I L L A Q E Q L E K A L D C Q I Y	
Query	8887	TCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAAGCCCTAGATTGTCAGATCTAC	
Sbjct	7931	TCTCCATCCTTCTAGCTCAGGAACAACCTTGAAAAAGCCCTAGATTGTCAGATCTAC	
CDS:non-structural p	2040	F S I L L A Q E Q L E K A L D C Q I Y	
CDS:polyprotein [Hep	2869	A C Y S I E P L D L P Q I I Q R L H G	
Query	8947	CCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACTCCATGGC	
Sbjct	7991	CCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACTCCATGGC	
CDS:non-structural p	2060	A C Y S I E P L D L P Q I I Q R L H G	
CDS:polyprotein [Hep	2889	S A F S L H S Y S P G E I N R V A S C	
Query	9007	GCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGC	
Sbjct	8051	GCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTTCATGC	
CDS:non-structural p	2080	S A F S L H S Y S P G E I N R V A S C	
CDS:polyprotein [Hep	2909	R K L G V P P L R V W R H R A R S V R	
Query	9067	GGAAACTTGGGGTACCGCCCTTGCAGTCTGGAGACATCGGGCCAGAAGTGTCCGC	
Sbjct	8111	GGAAACTTGGGGTACCGCCCTTGCAGTCTGGAGACATCGGGCCAGAAGTGTCCGC	
CDS:non-structural p	2100	R K L G V P P L R V W R H R A R S V R	
CDS:polyprotein [Hep	2929	R L L S Q G G R A A T C G K Y L F N W	
Query	9127	GGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGG	
Sbjct	8171	GGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTTCAACTGG	
CDS:non-structural p	2120	R L L S Q G G R A A T C G K Y L F N W	
CDS:polyprotein [Hep	2949	V R T K L K L T P I P A A S Q L D L S	
Query	9187	TAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGATTTATCC	
Sbjct	8231	TAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGATTTATCC	
CDS:non-structural p	2140	V R T K L K L T P I P A A S Q L D L S	
CDS:polyprotein [Hep	2969	W F V A G Y S G G D I Y H S L S R A R	
Query	9247	GGTTCGTTGCTGGTTACAGCGGGGAGACATATACAGCCTGTCTCGTGCCCGA	
Sbjct	8291	GGTTCGTTGCTGGTTACAGCGGGGAGACATATACAGCCTGTCTCGTGCCCGA	
CDS:non-structural p	2160	W F V A G Y S G G D I Y H S L S R A R	
CDS:polyprotein [Hep	2989	R W F M W C L L L S V G V G I Y L L	
Query	9307	GCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTATCTACTC	
Sbjct	8351	GCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTATCTACTC	
CDS:non-structural p	2180	R W F M W C L L L S V G V G I Y L L	
CDS:polyprotein [Hep	3009	N R	
Query	9367	ACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 9412	
Sbjct	8411	ACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 8456	
CDS:non-structural p	2200	N R	



Score = 719 bits (374), Expect = 0.0
Identities = 388/388 (100%), Gaps = 0/388 (0%)
Strand=Plus/Plus

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Query          2  CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACACTAC
Sbjct          2  CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACACTAC

Query          62  CTTACACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCTGTCAGCCTCCAGG
Sbjct          62  CTTACACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCTGTCAGCCTCCAGG

Query          122  CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC
Sbjct          122  CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC

Query          182  ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC
Sbjct          182  ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC

Query          242  CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA
Sbjct          242  CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTGGTACTGCCTGATA

CDS:polyprotein [Hep 1
Query          302  TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
Sbjct          302  TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
CDS:core-neo fusion 1
CDS:polyprotein [Hep 8      Q R K T K R N T N
Query          362  TCAAAGAAAAACCAAACGTAACACCAAC 389
Sbjct          362  TCAAAGAAAAACCAAACGTAACACCAAC 389
CDS:core-neo fusion 8      Q R K T K R N T N
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Score = 189 bits (98), Expect = 2e-43
Identities = 98/98 (100%), Gaps = 0/98 (0%)
Strand=Plus/Plus

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Query 9508  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT 9567
Sbjct 8552  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT 8611

Query 9568  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT 9605
Sbjct 8612  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT 8649
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CPU time: 0.16 user secs. 0.04 sys. secs 0.20 total secs.



Blast 2 Sequences results

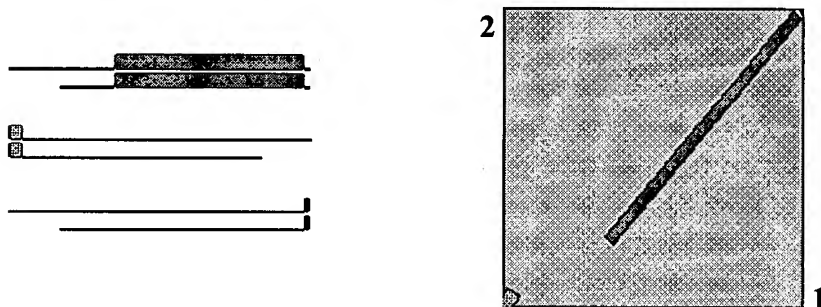
[PubMed](#)[Entrez](#)[BLAST](#)[OMIM](#)[Taxonomy](#)[Structure](#)

BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.17 [Aug-26-2007]

Match: Mismatch: gap open: gap extension:
x_dropoff: expect: wordsize: Filter ☒ View option
Masking character option Masking color option
☒ Show CDS translation

Sequence 1: [gi|5420376|Hepatitis C virus type 1b complete genome, isolate Con1](#)
Length = 9604 (1 .. 9605)

Sequence 2: [gi|5441834|Hepatitis C virus replicon I377/NS3-3'UTR](#)
Length = 7988 (1 .. 7989)



NOTE: Bitscore and expect value are calculated based on the size of the nr database.

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence.

Score = 1.142e+04 bits (5937), Expect = 0.0
Identities = 5993/5993 (100%), Gaps = 0/5993 (0%)
Strand=Plus/Plus

CDS:polyprotein [Hep	1027	A P I T A Y S Q Q T R G L L G C I I T
Query	3420	GCGCCTATTACGGCCTACTCCCAACAGACGCGAGGCCCTACTTGGCTGCATCATCAC
Sbjct	1804	GCGCCTATTACGGCCTACTCCCAACAGACGCGAGGCCCTACTTGGCTGCATCATCAC
CDS:non-structural p	2	A P I T A Y S Q Q T R G L L G C I I T
CDS:polyprotein [Hep	1047	L T G R D R N Q V E G E V Q V V S T A
Query	3480	CTCACAGGCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGC
Sbjct	1864	CTCACAGGCCGGGACAGGAACCAGGTCGAGGGGGAGGTCCAAGTGGTCTCCACCGC

CDS:non-structural p	22	L T G R D R N Q V E G E V Q V V S T A
CDS:polyprotein [Hep	1067	Q S F L A T C V N G V C W T V Y H G A
Query	3540	CAATCTTTTCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGC
Sbjct	1924	CAATCTTTTCCTGGCGACCTGCGTCAATGGCGTGTGTTGGACTGTCTATCATGGTGC
CDS:non-structural p	42	Q S F L A T C V N G V C W T V Y H G A
CDS:polyprotein [Hep	1087	S K T L A G P K G P I T Q M Y T N V D
Query	3600	TCAAAGACCCCTTGCCGGCCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGA
Sbjct	1984	TCAAAGACCCCTTGCCGGCCCAAAGGGCCCAATCACCCAAATGTACACCAATGTGGA
CDS:non-structural p	62	S K T L A G P K G P I T Q M Y T N V D
CDS:polyprotein [Hep	1107	D L V G W Q A P P G A R S L T P C T C
Query	3660	GACCTCGTCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTG
Sbjct	2044	GACCTCGTCGGCTGGCAAGCGCCCCCGGGGCGCGTTCCTTGACACCATGCACCTG
CDS:non-structural p	82	D L V G W Q A P P G A R S L T P C T C
CDS:polyprotein [Hep	1127	S S D L Y L V T R H A D V I P V R R R
Query	3720	AGCTCGGACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCG
Sbjct	2104	AGCTCGGACCTTTACTTGGTCACGAGGCATGCCGATGTCATTCCGGTGCGCCGGCG
CDS:non-structural p	102	S S D L Y L V T R H A D V I P V R R R
CDS:polyprotein [Hep	1147	D S R G S L L S P R P V S Y L K G S S
Query	3780	GACAGCAGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTCG
Sbjct	2164	GACAGCAGGGGAGCCTACTCTCCCCAGGCCCGTCTCCTACTTGAAGGGCTCTTC
CDS:non-structural p	122	D S R G S L L S P R P V S Y L K G S S
CDS:polyprotein [Hep	1167	G P L L C P S G H A V G I F R A A V C
Query	3840	GGTCCACTGCTCTGCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTG
Sbjct	2224	GGTCCACTGCTCTGCCCTCGGGGCACGCTGTGGGCATCTTTCGGGCTGCCGTGTG
CDS:non-structural p	142	G P L L C P S G H A V G I F R A A V C
CDS:polyprotein [Hep	1187	R G V A K A V D F V P V E S M E T T M
Query	3900	CGAGGGGTTCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTAT
Sbjct	2284	CGAGGGGTTCGAAGGCGGTGGACTTTGTACCCGTCGAGTCTATGGAAACCACTAT
CDS:non-structural p	162	R G V A K A V D F V P V E S M E T T M
CDS:polyprotein [Hep	1207	S P V F T D N S S P P A V P Q T F Q V
Query	3960	TCCCCGGTCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGT
Sbjct	2344	TCCCCGGTCTTCACGGACAACCTCGTCCCCTCCGGCCGTACCGCAGACATTCCAGGT
CDS:non-structural p	182	S P V F T D N S S P P A V P Q T F Q V
CDS:polyprotein [Hep	1227	H L H A P T G S G K S T K V P A A Y A
Query	4020	CATCTACACGCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGC
Sbjct	2404	CATCTACACGCCCTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTGCGTATGC
CDS:non-structural p	202	H L H A P T G S G K S T K V P A A Y A
CDS:polyprotein [Hep	1247	Q G Y K V L V L N P S V A A T L G F G
Query	4080	CAAGGGTATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGG
Sbjct	2464	CAAGGGTATAAGGTGCTTGTCTGAACCCGTCGTCGCCGCCACCCTAGGTTTCGG

CDS:non-structural p	222	Q G Y K V L V L N P S V A A T L G F G
CDS:polyprotein [Hep Query	1267 4140	Y M S K A H G I D P N I R T G V R T I TATATGTCTAAGGCACATGGTATCGACCCTAACATCAGAACCGGGGTAAGGACCAT
Sbjct	2524	TATATGTCTAAGGCACATGGTATCGACCCTAACATCAGAACCGGGGTAAGGACCAT
CDS:non-structural p	242	Y M S K A H G I D P N I R T G V R T I
CDS:polyprotein [Hep Query	1287 4200	T G A P I T Y S T Y G K F L A D G G C ACGGGTGCCCCCATCACGTACTCCACCTATGGCAAAGTTTCTTGCCGACGGTGGTTG
Sbjct	2584	ACGGGTGCCCCCATCACGTACTCCACCTATGGCAAAGTTTCTTGCCGACGGTGGTTG
CDS:non-structural p	262	T G A P I T Y S T Y G K F L A D G G C
CDS:polyprotein [Hep Query	1307 4260	G G A Y D I I I C D E C H S T D S T T GGGGGCGCCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCAC
Sbjct	2644	GGGGGCGCCTATGACATCATAATATGTGATGAGTGCCACTCAACTGACTCGACCAC
CDS:non-structural p	282	G G A Y D I I I C D E C H S T D S T T
CDS:polyprotein [Hep Query	1327 4320	L G I G T V L D Q A E T A G A R L V V CTGGGCATCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGGACTCGTCGT
Sbjct	2704	CTGGGCATCGGCACAGTCCTGGACCAAGCGGAGACGGCTGGAGCGGACTCGTCGT
CDS:non-structural p	302	L G I G T V L D Q A E T A G A R L V V
CDS:polyprotein [Hep Query	1347 4380	A T A T P P G S V T V P H P N I E E V GCCACCGCTACGCCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGT
Sbjct	2764	GCCACCGCTACGCCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGT
CDS:non-structural p	322	A T A T P P G S V T V P H P N I E E V
CDS:polyprotein [Hep Query	1367 4440	L S S T G E I P F Y G K A I P I E T I CTGTCCAGCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCAT
Sbjct	2824	CTGTCCAGCACTGGAGAAATCCCCTTTTATGGCAAAGCCATCCCCATCGAGACCAT
CDS:non-structural p	342	L S S T G E I P F Y G K A I P I E T I
CDS:polyprotein [Hep Query	1387 4500	G G R H L I F C H S K K K C D E L A A GGGGGGAGGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGC
Sbjct	2884	GGGGGGAGGCACCTCATTTTCTGCCATTCCAAGAAGAAATGTGATGAGCTCGCCGC
CDS:non-structural p	362	G G R H L I F C H S K K K C D E L A A
CDS:polyprotein [Hep Query	1407 4560	L S G L G L N A V A Y Y R G L D V S V CTGTCCGGCCTCGGACTCAATGCTGTAGCATATTACCGGGGCTTGATGTATCCGT
Sbjct	2944	CTGTCCGGCCTCGGACTCAATGCTGTAGCATATTACCGGGGCTTGATGTATCCGT
CDS:non-structural p	382	L S G L G L N A V A Y Y R G L D V S V
CDS:polyprotein [Hep Query	1427 4620	P T S G D V I V V A T D A L M T G F T CCAACTAGCGGAGACGTCAATTGTCGTAGCAACGGACGCTCTAATGACGGGCTTTAC
Sbjct	3004	CCAACTAGCGGAGACGTCAATTGTCGTAGCAACGGACGCTCTAATGACGGGCTTTAC
CDS:non-structural p	402	P T S G D V I V V A T D A L M T G F T
CDS:polyprotein [Hep Query	1447 4680	D F D S V I D C N T C V T Q T V D F S GATTTGACTCAGTGATCGACTGCAATACATGTGTACCCAGACAGTCGACTTCAG
Sbjct	3064	GATTTGACTCAGTGATCGACTGCAATACATGTGTACCCAGACAGTCGACTTCAG

CDS:non-structural p	422	D F D S V I D C N T C V T Q T V D F S
CDS:polyprotein [Hep	1467	D P T F T I E T T T V P Q D A V S R S
Query	4740	GACCCGACCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTC
Sbjct	3124	GACCCGACCTTCACCATTGAGACGACGACCGTGCCACAAGACGCGGTGTACGCTC
CDS:non-structural p	442	D P T F T I E T T T V P Q D A V S R S
CDS:polyprotein [Hep	1487	R R G R T G R G R M G I Y R F V T P G
Query	4800	CGGCGAGGCAGGACTGGTAGGGGCAGGATGGGCATTTACAGGTTTGTGACTCCAGG
Sbjct	3184	CGGCGAGGCAGGACTGGTAGGGGCAGGATGGGCATTTACAGGTTTGTGACTCCAGG
CDS:non-structural p	462	R R G R T G R G R M G I Y R F V T P G
CDS:polyprotein [Hep	1507	R P S G M F D S S V L C E C Y D A G C
Query	4860	CGGCCCTCGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTG
Sbjct	3244	CGGCCCTCGGGCATGTTTCGATTCTCGGTTCTGTGCGAGTGCTATGACGCGGGCTG
CDS:non-structural p	482	R P S G M F D S S V L C E C Y D A G C
CDS:polyprotein [Hep	1527	W Y E L T P A E T S V R L R A Y L N T
Query	4920	TGGTACGAGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACAC
Sbjct	3304	TGGTACGAGCTCACGCCCGCCGAGACCTCAGTTAGGTTGCGGGCTTACCTAAACAC
CDS:non-structural p	502	W Y E L T P A E T S V R L R A Y L N T
CDS:polyprotein [Hep	1547	G L P V C Q D H L E F W E S V F T G L
Query	4980	GGGTTGCCCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCT
Sbjct	3364	GGGTTGCCCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCCT
CDS:non-structural p	522	G L P V C Q D H L E F W E S V F T G L
CDS:polyprotein [Hep	1567	H I D A H F L S Q T K Q A G D N F P Y
Query	5040	CACATAGACGCCCATTTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCCTA
Sbjct	3424	CACATAGACGCCCATTTCTTGTCCCAGACTAAGCAGGCAGGAGACAACCTCCCCTA
CDS:non-structural p	542	H I D A H F L S Q T K Q A G D N F P Y
CDS:polyprotein [Hep	1587	V A Y Q A T V C A R A Q A P P P S W D
Query	5100	GTAGCATACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGA
Sbjct	3484	GTAGCATACCAGGCTACGGTGTGCGCCAGGGCTCAGGCTCCACCTCCATCGTGGGA
CDS:non-structural p	562	V A Y Q A T V C A R A Q A P P P S W D
CDS:polyprotein [Hep	1607	M W K C L I R L K P T L H G P T P L L
Query	5160	ATGTGGAAGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCTGCT
Sbjct	3544	ATGTGGAAGTGTCTCATACGGCTAAAGCCTACGCTGCACGGGCCAACGCCCTGCT
CDS:non-structural p	582	M W K C L I R L K P T L H G P T P L L
CDS:polyprotein [Hep	1627	R L G A V Q N E V T T T H P I T K Y I
Query	5220	AGGCTGGGAGCCGTTCAAAACGAGGTTACTACCACACACCCCATAAACCAATACAT
Sbjct	3604	AGGCTGGGAGCCGTTCAAAACGAGGTTACTACCACACACCCCATAAACCAATACAT
CDS:non-structural p	602	R L G A V Q N E V T T T H P I T K Y I
CDS:polyprotein [Hep	1647	A C M S A D L E V V T S T W V L V G G
Query	5280	GCATGCATGTCCGGCTGACCTGGAGGTCGTCACGAGCACCTGGGTGCTGGTAGGCGG
Sbjct	3664	GCATGCATGTCCGGCTGACCTGGAGGTCGTCACGAGCACCTGGGTGCTGGTAGGCGG

CDS:non-structural p	622	A C M S A D L E V V T S T W V L V G G
CDS:polyprotein [Hep Query	1667 5340	L A A L A A Y C L T T G S V V I V G R CTAGCAGCTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAG
Sbjct	3724	CTAGCAGCTCTGGCCGCGTATTGCCTGACAACAGGCAGCGTGGTCATTGTGGGCAG
CDS:non-structural p	642	L A A L A A Y C L T T G S V V I V G R
CDS:polyprotein [Hep Query	1687 5400	I L S G K P A I I P D R E V L Y R E F ATCTTGTCCGGAAGCCGGCCATCATTCCTGACAGGGAAGTCCTTTACCGGGAGTT
Sbjct	3784	ATCTTGTCCGGAAGCCGGCCATCATTCCTGACAGGGAAGTCCTTTACCGGGAGTT
CDS:non-structural p	662	I L S G K P A I I P D R E V L Y R E F
CDS:polyprotein [Hep Query	1707 5460	E M E E C A S H L P Y I E Q G M Q L A GAGATGGAAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGC
Sbjct	3844	GAGATGGAAGAGTGCGCCTCACACCTCCCTTACATCGAACAGGGAATGCAGCTCGC
CDS:non-structural p	682	E M E E C A S H L P Y I E Q G M Q L A
CDS:polyprotein [Hep Query	1727 5520	Q F K Q K A I G L L Q T A T K Q A E A CAATTCAAACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGC
Sbjct	3904	CAATTCAAACAGAAGGCAATCGGGTTGCTGCAAACAGCCACCAAGCAAGCGGAGGC
CDS:non-structural p	702	Q F K Q K A I G L L Q T A T K Q A E A
CDS:polyprotein [Hep Query	1747 5580	A P V V E S K W R T L E A F W A K H M GCTCCCGTGGTGAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATAT
Sbjct	3964	GCTCCCGTGGTGAATCCAAGTGGCGGACCCTCGAAGCCTTCTGGGCGAAGCATAT
CDS:non-structural p	722	A P V V E S K W R T L E A F W A K H M
CDS:polyprotein [Hep Query	1767 5640	N F I S G I Q Y L A G L S T L P G N P AATTTTCATCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCC
Sbjct	4024	AATTTTCATCAGCGGGATACAATATTTAGCAGGCTTGTCCACTCTGCCTGGCAACCC
CDS:non-structural p	742	N F I S G I Q Y L A G L S T L P G N P
CDS:polyprotein [Hep Query	1787 5700	I A S L M A F T A S I T S P L T T Q H ATAGCATCACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACA
Sbjct	4084	ATAGCATCACTGATGGCATTACAGCCTCTATCACCAGCCCGCTCACCACCCAACA
CDS:non-structural p	762	I A S L M A F T A S I T S P L T T Q H
CDS:polyprotein [Hep Query	1807 5760	L L F N I L G G W V A A Q L A P P S A CTCCTGTTTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGC
Sbjct	4144	CTCCTGTTTAACATCCTGGGGGGATGGGTGGCCGCCCAACTTGCTCCTCCCAGCGC
CDS:non-structural p	782	L L F N I L G G W V A A Q L A P P S A
CDS:polyprotein [Hep Query	1827 5820	S A F V G A G I A G A A V G S I G L G TCTGCTTTCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGG
Sbjct	4204	TCTGCTTTCGTAGGCGCCGGCATCGCTGGAGCGGCTGTTGGCAGCATAGGCCTTGG
CDS:non-structural p	802	S A F V G A G I A G A A V G S I G L G
CDS:polyprotein [Hep Query	1847 5880	V L V D I L A G Y G A G V A G A L V A GTGCTTGTGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGC
Sbjct	4264	GTGCTTGTGGATATTTTGGCAGGTTATGGAGCAGGGGTGGCAGGCGCGCTCGTGGC

CDS:non-structural p	822	V L V D I L A G Y G A G V A G A L V A
CDS:polyprotein [Hep	1867	K V M S G E M P S T E D L V N L L P A
Query	5940	AAGGTCATGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGC
Sbjct	4324	AAGGTCATGAGCGGCGAGATGCCCTCCACCGAGGACCTGGTTAACCTACTCCCTGC
CDS:non-structural p	842	K V M S G E M P S T E D L V N L L P A
CDS:polyprotein [Hep	1887	L S P G A L V V G V V C A A I L R R H
Query	6000	CTCTCCCCCTGGCGCCCTAGTCGTGCGGGTCTGTGCGCAGCGATACTGCGTCGGCA
Sbjct	4384	CTCTCCCCCTGGCGCCCTAGTCGTGCGGGTCTGTGCGCAGCGATACTGCGTCGGCA
CDS:non-structural p	862	L S P G A L V V G V V C A A I L R R H
CDS:polyprotein [Hep	1907	G P G E G A V Q W M N R L I A F A S R
Query	6060	GGCCCAGGGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTCGCTTCGCG
Sbjct	4444	GGCCCAGGGGAGGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTCGCTTCGCG
CDS:non-structural p	882	G P G E G A V Q W M N R L I A F A S R
CDS:polyprotein [Hep	1927	N H V S P T H Y V P E S D A A A R V T
Query	6120	AACCACGTCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCAC
Sbjct	4504	AACCACGTCTCCCCACGCACTATGTGCCTGAGAGCGACGCTGCAGCACGTGTCAC
CDS:non-structural p	902	N H V S P T H Y V P E S D A A A R V T
CDS:polyprotein [Hep	1947	I L S S L T I T Q L L K R L H Q W I N
Query	6180	ATCCTCTCTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAAGTGGATCAA
Sbjct	4564	ATCCTCTCTAGTCTTACCATCACTCAGCTGCTGAAGAGGCTTCACCAAGTGGATCAA
CDS:non-structural p	922	I L S S L T I T Q L L K R L H Q W I N
CDS:polyprotein [Hep	1967	D C S T P C S G S W L R D V W D W I C
Query	6240	GACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATG
Sbjct	4624	GACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTGGATATG
CDS:non-structural p	942	D C S T P C S G S W L R D V W D W I C
CDS:polyprotein [Hep	1987	V L T D F K T W L Q S K L L P R L P G
Query	6300	GTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGG
Sbjct	4684	GTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAGCTCCTGCCGCGATTGCCGGG
CDS:non-structural p	962	V L T D F K T W L Q S K L L P R L P G
CDS:polyprotein [Hep	2007	P F F S C Q R G Y K G V W R G D G I M
Query	6360	CCCTTCTTCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCAT
Sbjct	4744	CCCTTCTTCTCATGTCAACGTGGGTACAAGGGAGTCTGGCGGGGCGACGGCATCAT
CDS:non-structural p	982	P F F S C Q R G Y K G V W R G D G I M
CDS:polyprotein [Hep	2027	T T C P C G A Q I T G H V K N G S M R
Query	6420	ACCACCTGCCCATGTGGAGCACAGATCACCAGGACATGTGAAAAACGGTTCCATGAG
Sbjct	4804	ACCACCTGCCCATGTGGAGCACAGATCACCAGGACATGTGAAAAACGGTTCCATGAG
CDS:non-structural p	1002	T T C P C G A Q I T G H V K N G S M R
CDS:polyprotein [Hep	2047	V G P R T C S N T W H G T F P I N A Y
Query	6480	GTGGGGCCTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTA
Sbjct	4864	GTGGGGCCTAGGACCTGTAGTAACACGTGGCATGGAACATTCCCCATTAACGCGTA

CDS:non-structural p	1022	V G P R T C S N T W H G T F P I N A Y
CDS:polyprotein [Hep	2067	T G P C T P S P A P N Y S R A L W R V
Query	6540	ACGGGCCCCCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGT
Sbjct	4924	ACGGGCCCCCTGCACGCCCTCCCCGGCGCCAAATTATTCTAGGGCGCTGTGGCGGGT
CDS:non-structural p	1042	T G P C T P S P A P N Y S R A L W R V
CDS:polyprotein [Hep	2087	A E E Y V E V T R V G D F H Y V T G M
Query	6600	GCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCAT
Sbjct	4984	GCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGCAT
CDS:non-structural p	1062	A E E Y V E V T R V G D F H Y V T G M
CDS:polyprotein [Hep	2107	T D N V K C P C Q V P A P E F F T E V
Query	6660	ACTGACAACGTAAAGTGCCCGTGTTCAGGTTCCGGCCCCCGAATTCTTCACAGAAGT
Sbjct	5044	ACTGACAACGTAAAGTGCCCGTGTTCAGGTTCCGGCCCCCGAATTCTTCACAGAAGT
CDS:non-structural p	1082	T D N V K C P C Q V P A P E F F T E V
CDS:polyprotein [Hep	2127	G V R L H R Y A P A C K P L L R E E V
Query	6720	GGGGTGCGGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGT
Sbjct	5104	GGGGTGCGGTTGCACAGGTACGCTCCAGCGTGCAAACCCCTCCTACGGGAGGAGGT
CDS:non-structural p	1102	G V R L H R Y A P A C K P L L R E E V
CDS:polyprotein [Hep	2147	F L V G L N Q Y L V G S Q L P C E P E
Query	6780	TTCCTGGTCGGGCTCAATCAATACCTGGTTGGGTCACAGCTCCCATGCGAGCCCGA
Sbjct	5164	TTCCTGGTCGGGCTCAATCAATACCTGGTTGGGTCACAGCTCCCATGCGAGCCCGA
CDS:non-structural p	1122	F L V G L N Q Y L V G S Q L P C E P E
CDS:polyprotein [Hep	2167	D V A V L T S M L T D P S H I T A E T
Query	6840	GACGTAGCAGTGCTCACTTCCATGCTCACCGACCCCTCCACATTACGGCGGAGAC
Sbjct	5224	GACGTAGCAGTGCTCACTTCCATGCTCACCGACCCCTCCACATTACGGCGGAGAC
CDS:non-structural p	1142	D V A V L T S M L T D P S H I T A E T
CDS:polyprotein [Hep	2187	K R R L A R G S P P S L A S S S A S Q
Query	6900	AAGCGTAGGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCA
Sbjct	5284	AAGCGTAGGCTGGCCAGGGGATCTCCCCCTCCTTGGCCAGCTCATCAGCTAGCCA
CDS:non-structural p	1162	K R R L A R G S P P S L A S S S A S Q
CDS:polyprotein [Hep	2207	S A P S L K A T C T T R H D S P D A D
Query	6960	TCTGCGCCTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGGACGCTGA
Sbjct	5344	TCTGCGCCTTCCTTGAAGGCAACATGCACTACCCGTCATGACTCCCCGGACGCTGA
CDS:non-structural p	1182	S A P S L K A T C T T R H D S P D A D
CDS:polyprotein [Hep	2227	I E A N L L W R Q E M G G N I T R V E
Query	7020	ATCGAGGCCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGA
Sbjct	5404	ATCGAGGCCAACCTCCTGTGGCGGCAGGAGATGGGCGGGAACATCACCCGCGTGGA
CDS:non-structural p	1202	I E A N L L W R Q E M G G N I T R V E
CDS:polyprotein [Hep	2247	E N K V V I L D S F E P L Q A E E D E
Query	7080	GAAAATAAGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGA
Sbjct	5464	GAAAATAAGGTAGTAATTTTGGACTCTTTCGAGCCGCTCCAAGCGGAGGAGGATGA

1222	CDS:non-structural p	E N K V I L D S F E P L Q A E E D E
2267	CDS:polypeptide [Hep	E V S V P A E I L R R S R K F P R A M
5524	subject	G A G T A T C C G T T C C G G G G A G A T C C T G G G A G A G T C C A G A A T T C C C T C G A G C G A T
1242	CDS:non-structural p	E V S V P A E I L R R S R K F P R A M
2287	CDS:polypeptide [Hep	I W A R P D Y N P L L E S W K D P D
5584	subject	A T A T G G G C A C G C C C G G A T T A C A C C C T C C A C T G T T A G A G T C C T G A A G A C C C G G A
1262	CDS:non-structural p	I W A R P D Y N P L L E S W K D P D
2307	CDS:polypeptide [Hep	V P P V V H G C P L P A K A P P I P
7260	Query	G T C C C T C C A G T G G T A C A C G G G T G T C C A T T G C G G C C T G C C A A G G C C C C T C C G A T A C C
5644	subject	G T C C C T C C A G T G G T A C A C G G G T G T C C A T T G C G G C C C T G C C A A G G C C C C T C C G A T A C C
1282	CDS:non-structural p	V P P V V H G C P L P A K A P P I P
2327	CDS:polypeptide [Hep	P R R K R T V V L S E S T V S S A L A
7320	Query	C C A C G G A G A A G A C G G T T G T C C T G T C A G A A T C T A C C G T G T C T T C T T G C C T T G G C
5704	subject	C C A C G G A G A A G A C G G T T G T C C T G T C A G A A T C T A C C G T G T C T T C T T G C C T T G G C
1302	CDS:non-structural p	P R R K R T V V L S E S T V S S A L A
2347	CDS:polypeptide [Hep	L A T K T F G S S E S S A V D S G T A
7380	Query	C T C G C C A A A G A C C T T C G G C A G C T C C G A A T C G T C G G C C C G T C G A C A G C G G C A C G G C
5764	subject	C T C G C C A A A G A C C T T C G G C A G C T C C G A A T C G T C G G C C C G T C G A C A G C G G C A C G G C
1322	CDS:non-structural p	L A T K T F G S S E S S A V D S G T A
2367	CDS:polypeptide [Hep	A S P D Q P S D D G D A G S D V E S Y
7440	Query	G C C T C C T G A C C A G C C C T C C G A C G A C G G C G A T C C G A C G T T G A G T C G T A
5824	subject	G C C T C C T G A C C A G C C C T C C G A C G A C G G C G A T C C G A C G T T G A G T C G T A
1342	CDS:non-structural p	A S P D Q P S D D G D A G S D V E S Y
2387	CDS:polypeptide [Hep	S M P P L E G E P G D P D L S D G S W
7500	Query	T C C A T G C C C C C C C C C T T G A G G G G A G C C G G G A T C C C G A T C T C A G C G A C G G G T C T T G
5884	subject	T C C A T G C C C C C C C C C T T G A G G G G A G C C G G G A T C C C G A T C T C A G C G A C G G G T C T T G
1362	CDS:non-structural p	S M P P L E G E P G D P D L S D G S W
2407	CDS:polypeptide [Hep	T V S E A S E D V V C C S M S Y T W
7560	Query	A C C G T A A G C G A G G G T A G T G A G A C G T C G T C T G C T G C T G A T G T C C T A C A C A T G
5944	subject	A C C G T A A G C G A G G G T A G T G A G A C G T C G T C T G C T G C T G A T G T C C T A C A C A T G
1382	CDS:non-structural p	T V S E A S E D V V C C S M S Y T W
2427	CDS:polypeptide [Hep	G A L I T P C A A E T K L P I N A L
7620	Query	G G C G C C C T G A T C A C G C C A T G G C G T G C G G A G A A C C A A G C T G C C C A T C A A T G C A C T
6004	subject	G G C G C C C T G A T C A C G C C A T G G C G T G C G G A G A A C C A A G C T G C C C A T C A A T G C A C T
1402	CDS:non-structural p	G A L I T P C A A E T K L P I N A L
2447	CDS:polypeptide [Hep	N S L T R H H N L V A T S R S A S
7680	Query	A A C T C T T T G C T C C G T C A C C A C A A C T T G G T C T A T G C T A C A A C A T C T C G C A G C G C A A G
6064	subject	A A C T C T T T G C T C C G T C A C C A C A A C T T G G T C T A T G C T A C A A C A T C T C G C A G C G C A A G

CDS:non-structural p	1422	N S L L R H H N L V Y A T T S R S A S
CDS:polyprotein [Hep	2467	R Q K K V T F D R L Q V L D D H Y R D
Query	7740	CGGCAGAAGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGA
Sbjct	6124	CGGCAGAAGAAGGTCACCTTTGACAGACTGCAGGTCCTGGACGACCACTACCGGGA
CDS:non-structural p	1442	R Q K K V T F D R L Q V L D D H Y R D
CDS:polyprotein [Hep	2487	L K E M K A K A S T V K A K L L S V E
Query	7800	CTCAAGGAGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGA
Sbjct	6184	CTCAAGGAGATGAAGGCGAAGGCGTCCACAGTTAAGGCTAAACTTCTATCCGTGGA
CDS:non-structural p	1462	L K E M K A K A S T V K A K L L S V E
CDS:polyprotein [Hep	2507	A C K L T P P H S A R S K F G Y G A K
Query	7860	GCCTGTAAGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAA
Sbjct	6244	GCCTGTAAGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGGCAAA
CDS:non-structural p	1482	A C K L T P P H S A R S K F G Y G A K
CDS:polyprotein [Hep	2527	V R N L S S K A V N H I R S V W K D L
Query	7920	GTCCGGAACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTT
Sbjct	6304	GTCCGGAACCTATCCAGCAAGGCCGTTAACCACATCCGCTCCGTGTGGAAGGACTT
CDS:non-structural p	1502	V R N L S S K A V N H I R S V W K D L
CDS:polyprotein [Hep	2547	E D T E T P I D T T I M A K N E V F C
Query	7980	GAAGACACTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTCTG
Sbjct	6364	GAAGACACTGAGACACCAATTGACACCACCATCATGGCAAAAATGAGGTTTCTG
CDS:non-structural p	1522	E D T E T P I D T T I M A K N E V F C
CDS:polyprotein [Hep	2567	Q P E K G G R K P A R L I V F P D L G
Query	8040	CAACCAGAGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCCCAGATTG
Sbjct	6424	CAACCAGAGAAGGGGGGCGCAAGCCAGCTCGCCTTATCGTATTCCCAGATTG
CDS:non-structural p	1542	Q P E K G G R K P A R L I V F P D L G
CDS:polyprotein [Hep	2587	R V C E K M A L Y D V V S T L P Q A V
Query	8100	CGTGTGTGCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGT
Sbjct	6484	CGTGTGTGCGAGAAAATGGCCCTTTACGATGTGGTCTCCACCCTCCCTCAGGCCGT
CDS:non-structural p	1562	R V C E K M A L Y D V V S T L P Q A V
CDS:polyprotein [Hep	2607	G S S Y G F Q Y S P G Q R V E F L V N
Query	8160	GGCTCTTCATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAA
Sbjct	6544	GGCTCTTCATACGGATTCCAATACTCTCCTGGACAGCGGGTCGAGTTCCTGGTGAA
CDS:non-structural p	1582	G S S Y G F Q Y S P G Q R V E F L V N
CDS:polyprotein [Hep	2627	W K A K K C P M G F A Y D T R C F D S
Query	8220	TGGAAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTGTGACTC
Sbjct	6604	TGGAAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTGTGACTC
CDS:non-structural p	1602	W K A K K C P M G F A Y D T R C F D S
CDS:polyprotein [Hep	2647	V T E N D I R V E E S I Y Q C C D L A
Query	8280	GTCAGTGAAGATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGC
Sbjct	6664	GTCAGTGAAGATGACATCCGTGTTGAGGAGTCAATCTACCAATGTTGTGACTTGGC

CDS:non-structural p	1622	V T E N D I R V E E S I Y Q C C D L A
CDS:polyprotein [Hep	2667	E A R Q A I R S L T E R L Y I G G P L
Query	8340	GAAGCCAGACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCT
Sbjct	6724	GAAGCCAGACAGGCCATAAGGTCGCTCACAGAGCGGCTTTACATCGGGGGCCCCCT
CDS:non-structural p	1642	E A R Q A I R S L T E R L Y I G G P L
CDS:polyprotein [Hep	2687	N S K G Q N C G Y R R C R A S G V L T
Query	8400	AATTCTAAAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCAGCGGTGTACTGAC
Sbjct	6784	AATTCTAAAGGGCAGAACTGCGGCTATCGCCGGTGCCGCGCAGCGGTGTACTGAC
CDS:non-structural p	1662	N S K G Q N C G Y R R C R A S G V L T
CDS:polyprotein [Hep	2707	S C G N T L T C Y L K A A A A C R A A
Query	8460	AGCTGCGGTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGC
Sbjct	6844	AGCTGCGGTAATACCCTCACATGTTACTTGAAGGCCGCTGCGGCCTGTGAGCTGC
CDS:non-structural p	1682	S C G N T L T C Y L K A A A A C R A A
CDS:polyprotein [Hep	2727	L Q D C T M L V C G D D L V V I C E S
Query	8520	CTCCAGGACTGCACGATGCTCGTATGCGGAGACGACCTTGTCGTTATCTGTGAAAG
Sbjct	6904	CTCCAGGACTGCACGATGCTCGTATGCGGAGACGACCTTGTCGTTATCTGTGAAAG
CDS:non-structural p	1702	L Q D C T M L V C G D D L V V I C E S
CDS:polyprotein [Hep	2747	G T Q E D E A S L R A F T E A M T R Y
Query	8580	GGGACCCAAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATA
Sbjct	6964	GGGACCCAAGAGGACGAGGCGAGCCTACGGGCCTTCACGGAGGCTATGACTAGATA
CDS:non-structural p	1722	G T Q E D E A S L R A F T E A M T R Y
CDS:polyprotein [Hep	2767	A P P G D P P K P E Y D L E L I T S C
Query	8640	GCCCCCCTGGGGACCCGCCAAACCAGAATACGACTTGGAGTTGATAACATCATG
Sbjct	7024	GCCCCCCTGGGGACCCGCCAAACCAGAATACGACTTGGAGTTGATAACATCATG
CDS:non-structural p	1742	A P P G D P P K P E Y D L E L I T S C
CDS:polyprotein [Hep	2787	S N V S V A H D A S G K R V Y Y L T R
Query	8700	TCCAATGTGTGAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCG
Sbjct	7084	TCCAATGTGTGAGTCGCGCACGATGCATCTGGCAAAGGGTGTACTATCTCACCCG
CDS:non-structural p	1762	S N V S V A H D A S G K R V Y Y L T R
CDS:polyprotein [Hep	2807	P T T P L A R A A W E T A R H T P V N
Query	8760	CCCACCACCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAA
Sbjct	7144	CCCACCACCCCTTGCGCGGGCTGCGTGGGAGACAGCTAGACACACTCCAGTCAA
CDS:non-structural p	1782	P T T P L A R A A W E T A R H T P V N
CDS:polyprotein [Hep	2827	W L G N I I M Y A P T L W A R M I L M
Query	8820	TGGCTAGGCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGAT
Sbjct	7204	TGGCTAGGCAACATCATCATGTATGCGCCACCTTGTGGGCAAGGATGATCCTGAT
CDS:non-structural p	1802	W L G N I I M Y A P T L W A R M I L M
CDS:polyprotein [Hep	2847	H F F S I L L A Q E Q L E K A L D C Q
Query	8880	CATTTCTTCTCCATCCTTCTAGCTCAGGAACAACCTGAAAAAGCCCTAGATTGTCA
Sbjct	7264	CATTTCTTCTCCATCCTTCTAGCTCAGGAACAACCTGAAAAAGCCCTAGATTGTCA

CDS:non-structural p	1822	H F F S I L L A Q E Q L E K A L D C Q
CDS:polyprotein [Hep	2867	Y G A C Y S I E P L D L P Q I I Q R L
Query	8940	TACGGGGCCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACT
Sbjct	7324	TACGGGGCCTGTTACTCCATTGAGCCACTTGACCTACCTCAGATCATTCAACGACT
CDS:non-structural p	1842	Y G A C Y S I E P L D L P Q I I Q R L
CDS:polyprotein [Hep	2887	G L S A F S L H S Y S P G E I N R V A
Query	9000	GGCCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGC
Sbjct	7384	GGCCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGC
CDS:non-structural p	1862	G L S A F S L H S Y S P G E I N R V A
CDS:polyprotein [Hep	2907	C L R K L G V P P L R V W R H R A R S
Query	9060	TGCCTCAGGAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAG
Sbjct	7444	TGCCTCAGGAACTTGGGGTACCGCCCTTGCGAGTCTGGAGACATCGGGCCAGAAG
CDS:non-structural p	1882	C L R K L G V P P L R V W R H R A R S
CDS:polyprotein [Hep	2927	R A R L L S Q G G R A A T C G K Y L F
Query	9120	CGCGCTAGGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTT
Sbjct	7504	CGCGCTAGGCTACTGTCCCAGGGGGGAGGGCTGCCACTTGTGGCAAGTACCTCTT
CDS:non-structural p	1902	R A R L L S Q G G R A A T C G K Y L F
CDS:polyprotein [Hep	2947	W A V R T K L K L T P I P A A S Q L D
Query	9180	TGGGCAGTAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGA
Sbjct	7564	TGGGCAGTAAGGACCAAGCTCAAACCTCACTCCAATCCCGGCTGCGTCCCAGTTGGA
CDS:non-structural p	1922	W A V R T K L K L T P I P A A S Q L D
CDS:polyprotein [Hep	2967	S S W F V A G Y S G G D I Y H S L S R
Query	9240	TCCAGCTGGTTCGTTGCTGGTTACAGCGGGGAGACATATATCACAGCCTGTCTCG
Sbjct	7624	TCCAGCTGGTTCGTTGCTGGTTACAGCGGGGAGACATATATCACAGCCTGTCTCG
CDS:non-structural p	1942	S S W F V A G Y S G G D I Y H S L S R
CDS:polyprotein [Hep	2987	R P R W F M W C L L L L S V G V G I Y
Query	9300	CGACCCCGCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTA
Sbjct	7684	CGACCCCGCTGGTTCATGTGGTGCCTACTCCTACTTTCTGTAGGGGTAGGCATCTA
CDS:non-structural p	1962	R P R W F M W C L L L L S V G V G I Y
CDS:polyprotein [Hep	3007	L P N R
Query	9360	CTCCCCAACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 9
Sbjct	7744	CTCCCCAACCGATGAACGGGGAGCTAAACACTCCAGGCCAATAGGCCATCCTG 7
CDS:non-structural p	1982	L P N R



Score = 696 bits (362), Expect = 0.0
 Identities = 376/376 (100%), Gaps = 0/376 (0%)
 Strand=Plus/Plus

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Query          2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC
Sbjct         2      CCAGCCCCCGATTGGGGGCGACACTCCACCATAGATCACTCCCCTGTGAGGAACTAC

Query        62      CTTACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG
Sbjct       62      CTTACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTGCAGCCTCCAGG

Query       122      CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC
Sbjct      122      CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCC

Query       182      ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC
Sbjct      182      ACGACCGGGTCCTTTCTTGGATCAACCCGCTCAATGCCTGGAGATTGGGCGTGCCC

Query       242      CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTTGGTACTGCCTGATA
Sbjct      242      CGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGGCCTTGTTGGTACTGCCTGATA

CDS:polyprotein [Hep 1
Query        302      TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
Sbjct       302      TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACGAATCCTAA
CDS:core-neo fusion 1
                                     M S T N P K

CDS:polyprotein [Hep 8      Q R K T K
Query        362      TCAAAGAAAAACCAA 377
Sbjct       362      TCAAAGAAAAACCAA 377
CDS:core-neo fusion 8      Q R K T K

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Score = 189 bits (98), Expect = 2e-43
 Identities = 98/98 (100%), Gaps = 0/98 (0%)
 Strand=Plus/Plus

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Query  9508  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT  9567
Sbjct  7892  GGTGGCTCCATCTTAGCCCTAGTCACGGCTAGCTGTGAAAGGTCCGTGAGCCGCTTGACT  7951

Query  9568  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT  9605
Sbjct  7952  GCAGAGAGTGCTGATACTGGCCTCTCTGCAGATCAAGT  7989

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CPU time: 0.15 user secs. 0.04 sys. secs 0.19 total secs.